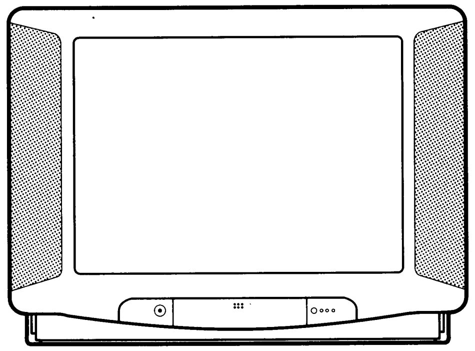
GoldStar

COLOUR TV
SERVICE MANUAL

CAUTION
BEFORE SERVICING THE CHASSIS, READ THE "SAFETY PRECAUTIONS" IN THIS MANUAL.



CHASSIS : MC-15A

MODEL : CF-29C20P

GoldStar

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SPECIFICATIONS

Power Input Rating:	160 watts (nominal), AC 230 volts, 50Hz	
Receiving TV System:	PAL/SECAM-B/G, NTSC 3.58/4.43 MULTI 26 SYSTEMS	
Aerial Input Impedance:	75ohm unbalanced type VHF and UHF	
Receiving Channels:	PAL B/G, SECAM B/G system	
	Any of VHF channel	channels 2 to 12
	Any of UHF channels	channels 21 to 69
	PAL D/K, SECAM D/K system	
	Any of VHF channels	channels 1 to 12
	Any of UHF channels	channels 21 to 69
	PAL I system	
	Any of UHF channels	channels 21 to 69
	NTSC Standard (US M, JAPAN M) system	
	Any of VHF channels	channels 2 to 13/1 to 12
	Any of UHF channels	channels 14 to 78/13 to 62
	NTSC 3.58/5.5 System	
	NTSC 4.43/5.5 System	VCR Play Back
	PAL 50/60Hz System	
	SECAM 50/60Hz System	VIDEO DISK Play Back
	NTSC 50/60Hz System	
Intermediate Frequencies:	Picture I-F carrier frequency	38.0MHz
	Sound I-F carrier frequency	33.5/32.5/32.0/31.5MHz
Chassis Construction:	IC Solid State, Horizontal Chassis	
Picture Tube:	A68AGA20X01	
Sound Output:	12W X 2Way(MAX.)	
Cabinet:	Plastic, Table Top	
Dimension:	Height	613mm
	Width	760mm
	Depth	526mm

Features: On-screen display, VIDEO and AUDIO input terminals, Remote Control

Specifications are subject to change without notice.

SAFETY PRECAUTIONS

WARNING : BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTIONS", SAFETY INSTRUCTIONS" AND "PRODUCT SAFETY NOTICE" DESCRIBED BELOW.

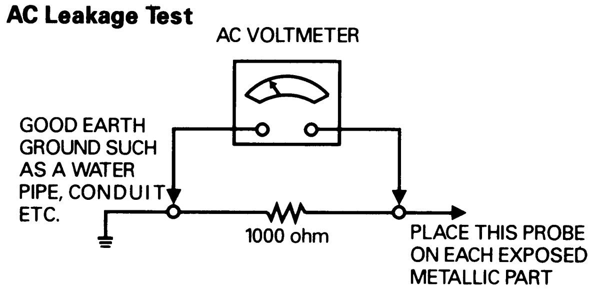
X-RAY RADIATION PRECAUTIONS

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 29KV at Zero beam current (minimum brightness) under specified power source. The high voltage must not, under any circumstances, exceed 30KV. Each time a receiver requires servicing, the high voltage should be checked. It is recommended the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY INSTRUCTIONS

1. Potential as high as 25,000-30,000 volts is present when this receiver is operating. Operation of the receiver outside the cabinet or with the back cover removed involves a shock hazard from the receiver.
   (1) Servicing should not be attempted by anyone who don't know the precautions necessary through and through when working on high-voltage equipment.
   (2) Always discharge the picture tube anode to the CHASSIS GROUND to reduce the shock hazard before removing the anode cap.
   (3) Perfectly discharge the high potential of the picture tube before handling.
   (WARNING: Risk of implosion. Handle with care.)
2. If any Fuse in this TV receiver is blown, replace it with the FUSE specified in the chassis parts list only.
3. When replacing parts or circuit boards, wind the lead wires around terminals before soldering.
4. When replacing a high wattage resistor (oxide metal film resistor) in circuit board, keep the resistor 10 mm away from circuit board.
5. Keep wires away from high voltage or high temperature components.
6. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts, etc., to be sure the set is safe to operate without danger of electrical shock. Since this TV has AVC (Automatic Voltage Control) circuit, it may be operated nonadjustably within the voltage area indicated in the label attached at back cover. (Do not use a line isolation transformer during this check). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner.
   Connect a 1000 ohm resistor between a known good earth ground, (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1000 ohm resistor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 1 volt RMS. This corresponds to 1 mA. AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

AC Leakage Test


AC VOLTMETER
GOOD EARTH GROUND SUCH AS A WATER PIPE, CONDUIT ETC.
1000 ohm
PLACE THIS PROBE ON EACH EXPOSED METALLIC PART

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed without being noticed by a visual inspection and the X-RAY RADIATION protection afforded by some of them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified by ⚠ marks on the schematic diagram and the replacement parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create X-RAY RADIATION.

SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the *SAFETY PRECAUTIONS* on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
   a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
   b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
   c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.
   CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
   d. Discharging the picture tube anode.
2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe.
   Do not test high voltage by "drawing an arc".
3. Discharge the picture tube anode only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube anode button, using an insulating handle to avoid personal contact with high voltage.
4. Do not spray chemicals on or near this receiver or any of its assemblies.
5. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).
   CAUTION: This is a flammable mixture.
   Unless specified otherwise in this service manual, lubrication of contacts in not required.
6. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
8. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.
   Always remove the test receiver ground lead last.
9. Use with this receiver only the test fixtures specified in this service manual.
   CAUTION: Do not connect the test fixture ground strap to any heatsink in this receiver.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some fieldeffect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device , touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the bruching together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range of 500° F to 600° F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clear the surfaces to be soldered. Use a mall wirebristle (0.5 inch or 1.25cm) brush with a metal handle.
   Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique.
   a. Allow the soldering iron tip to reach normal temperature. (500° F to 600° F)
   b. Heat the component lead until the solder melts.
   c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
   CAUTION: Work quickly to avoid overheating the circuitboard printed foil.
6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach a normal temperature (500° F to 600° F)
   b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.
   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil.
   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Remove/Replacement

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush.

(It is not necessary to reapply acrylic coating to the areas).

"Small-Signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

Power Output, Transistor Device Removal/Replacement

1. Heat and remove all solder from around the transistor heads.
2. Remove the heatsink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendiculaly to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original"leads. If they are not shiny, reheat them and if necessary, apply additional solder.

Fuse and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.
3. Solder the connections.
   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

At IC Connections

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

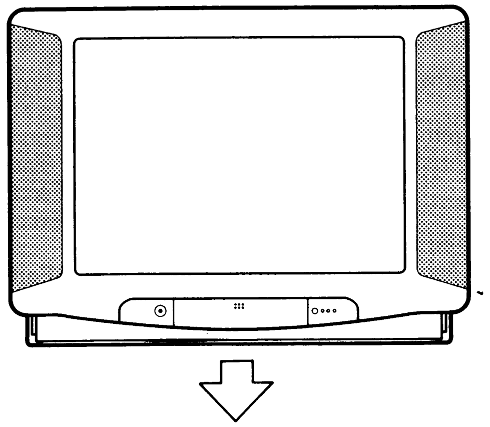
At Other Connections

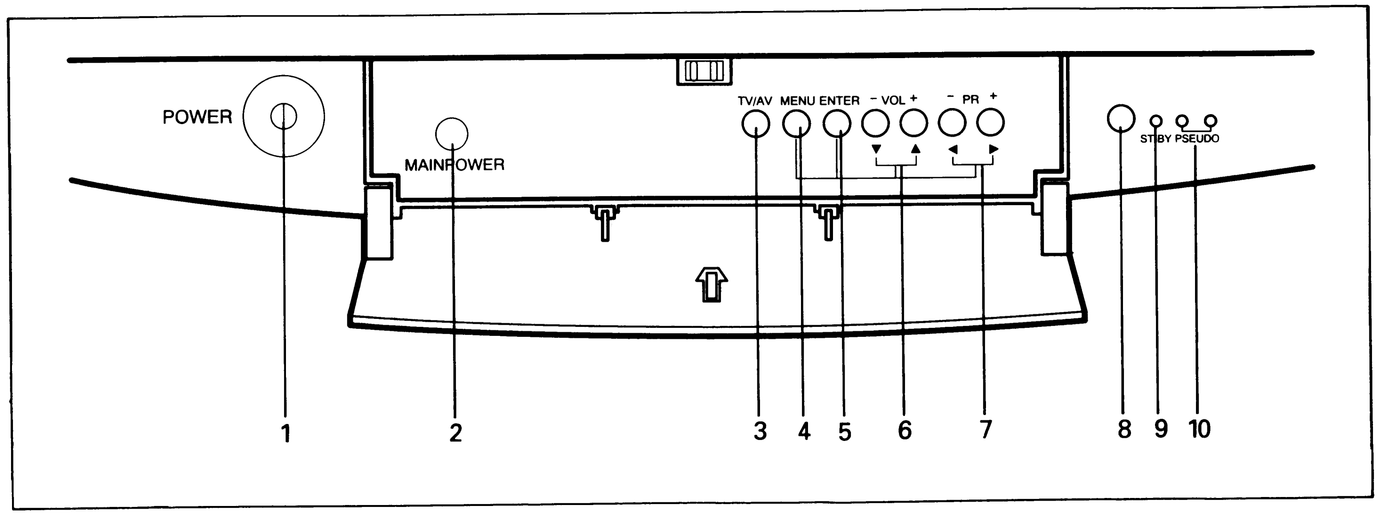
Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife.
   Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side.
   Carefully crimp and solder the connections.
   CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

CONTROLS LOCATION

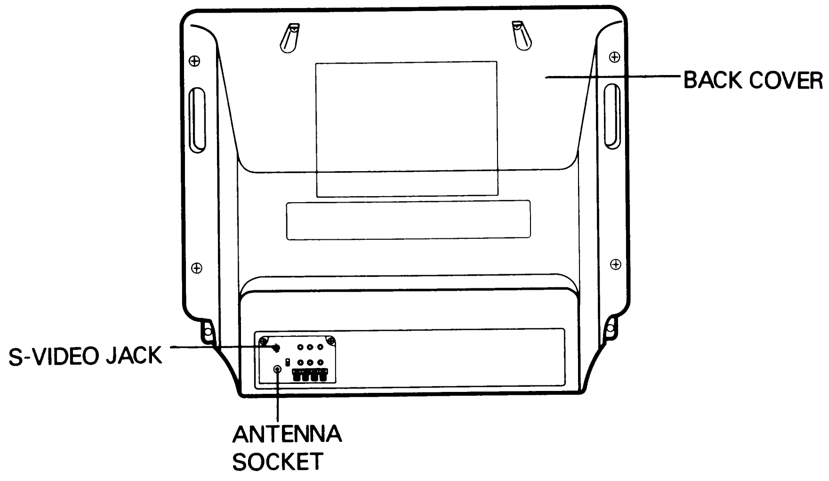
FRONT

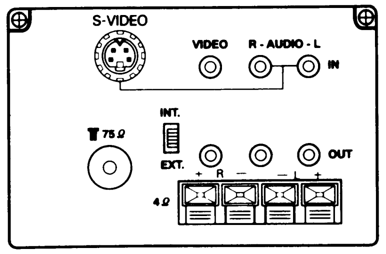



POWER
MAIN POWER
TV/AV
MENU
ENTER
- VOL +
- PR +
ST BY
PSEUDO
1
2
3
4
5
6
7
8
9
10

1. SUB POWER BUTTON
2. MAIN POWER BUTTON
3. TV/AV MODE SELECTION BUTTON
4. MENU BUTTON
5. ENTER BUTTON
6. VOLUME UP/DOWN BUTTONS
7. PROGRAM UP/DOWN BUTTONS
8. REMOTE CONTROL SENSOR
9. STAND-BY INDICATOR
10. PSEUDO INDICATOR

BACK


BACK COVER
S-VIDEO JACK
ANTENNA SOCKET


S-VIDEO
VIDEO
R - AUDIO - L
IN
INT.
EXT.
75Ω
OUT
4Ω
+ R −
− L +

DISASSEMBLY INSTRUCTIONS

BACK CABINET REMOVAL

Remove 8 screws residing on the back cabinet and carefully separate the back cabinet from the front cabinet.

MAIN CHASSIS REMOVAL

Grasp both sides of the main chassis, pull it backward smoothly.

SPEAKER ASSY REMOVAL

1. Remove P604 and P605 connectors between the speaker and the main chassis.
2. To remove the speaker, pull out the speaker supporter from the front cabinet.

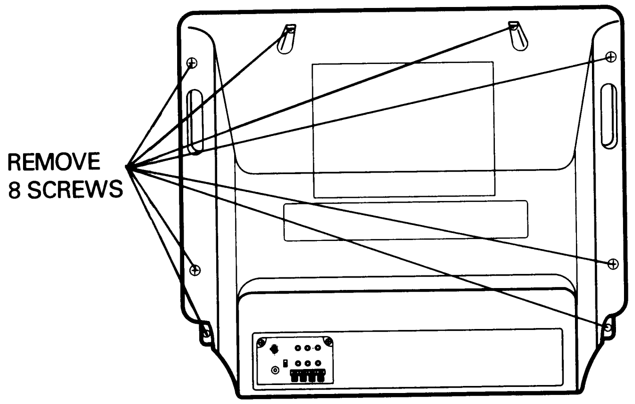
CPT REMOVAL

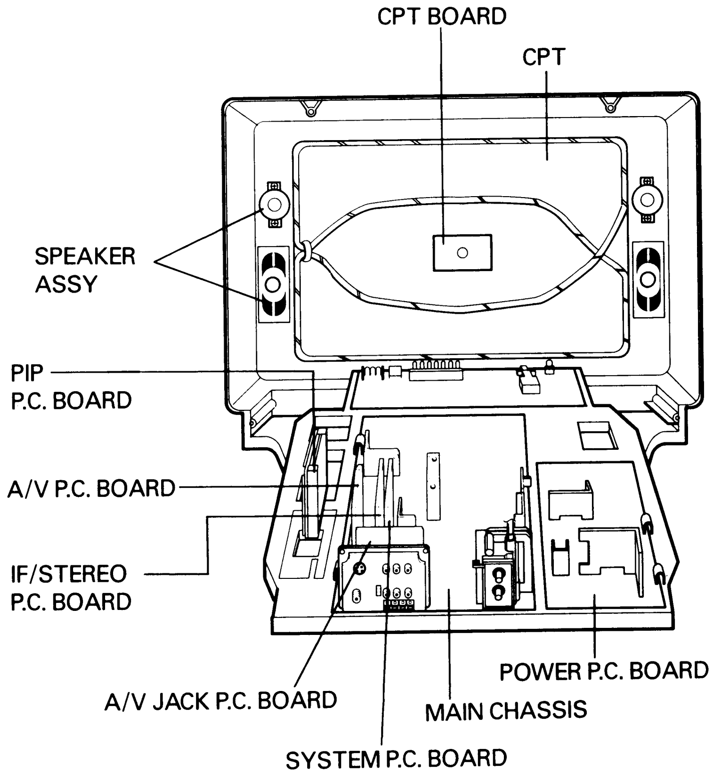
1. Pull out the CPT board from the CPT neck.
2. Place the front cabinet on soft material so as not to mar the front surface or damage control knobs.
3. Remove 4 nuts securing the picture tube mounting brackets to the front cabinet.
4. Carefully separate CPT from the front cabinet.

PICTURE TUBE HANDLING CAUTION

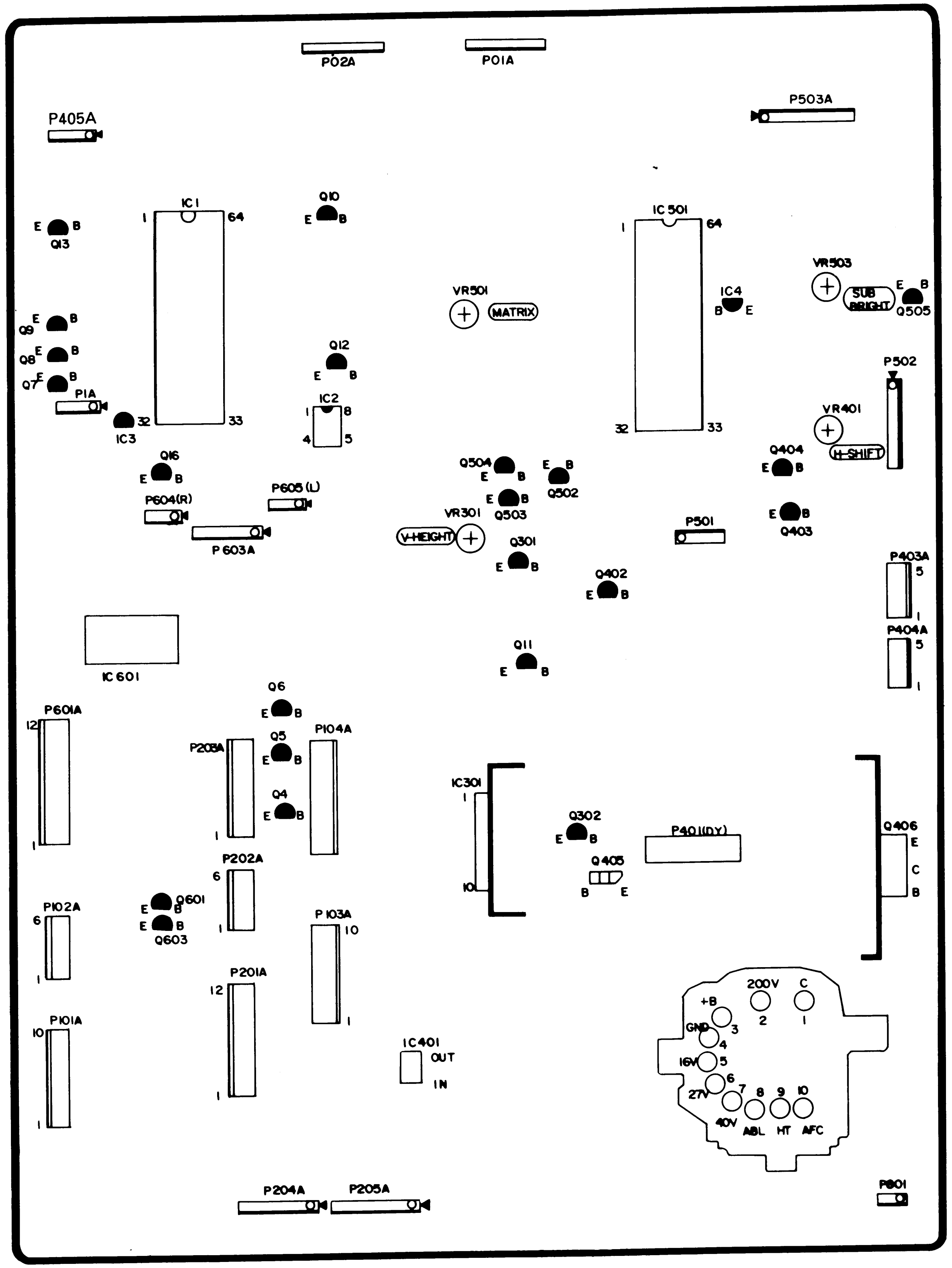
Due to high vacuum and large surface area of picture tube, great care must be exercised when handling picture tube. Always lift picture tube by grasping it firmly around face-plate.

NEVER LIFT TUBE BY ITS NECK. The picture tube must not be scratched or subjected to excessive pressure as fracture of glass may result in an implosion of considerable violence which can cause personal injury or property damage.


REMOVE
8 SCREWS


CPT BOARD
CPT
SPEAKER
ASSY
PIP
P.C. BOARD
A/V P.C. BOARD
IF/STEREO
P.C. BOARD
A/V JACK P.C. BOARD
SYSTEM P.C. BOARD
MAIN CHASSIS
POWER P.C. BOARD

PARTS LOCATION DIAGRAM OF MAIN CHASSIS


P02A
P01A
P405A
P503A
IC1
Q10
Q13
Q9
Q8
Q7
P1A
IC3
Q12
IC2
IC 501
IC4
VR501
MATRIX
VR503
SUB BRIGHT
Q505
P502
VR401
H-SHIFT
Q16
P604(R)
P605(L)
P603A
Q504
Q503
Q502
VR301
V-HEIGHT
Q301
P501
Q404
Q403
P403A
P404A
Q402
IC 601
Q11
P601A
Q6
Q5
Q4
P203A
P104A
IC301
Q302
Q405
P401(DY)
Q406
P202A
P102A
Q601
Q603
P103A
P201A
P101A
IC401
OUT
IN
200V
C
+B
GND
16V
27V
40V
ABL
HT
AFC
P204A
P205A
P801

ADJUSTMENT INSTRUCTIONS

1.APPLICATION

This instruction is applicable to all models using the MC-15A chassis.

2. SPECIFICATION

(1) CIRCUMFERENCE CONDITION

If there is no particular guidance, adjust the MC-15A chassis on the following conditions.

(2) NECESSARY INSTRUMENTS

1) PIF/SIF Board Alignment Instruments

- Sweep Generator and Marker Unit
- Plug In Unit (450-U82)
- Alignment Scope (5121A)
- AM-FM Sig. Generator (MSG-274E)
- DC Power Supplier (0-20V, 1A DC): 2EA
- Digital Multimeter: 1EA
- Detector 1 set
- Capacitor: Ceramic, 0.01uF/50V, 2EA
- Resistor: 3.3K(1/8W) 1EA, 4.7K(1/8W) 1EA, 1K(1/8W)) 2EA, 10K(1/8W) 2EA
- Transistor: KTC1815-Y, 1EA
- Switch: Button SW, 1EA

2) System Converter Board Alignment Instruments

- DC Power Supplier (0-20V, 1A DC): 1EA
- Oscilloscope: 1EA
- Digital Multimeter: 1EA
- FM-AM Signal Generator (MSG-274E)
- Resistor: 10KΩ (1/8W) 1EA
- Coupling Condenser : 0.01μ F/50 Ceramic, Condenser, 2EA

3) Main Board Alignment Instruments

- Color Signal Generator (PAL/SECAM)
- Oscilloscope
- Digital Multimeter
- TV-Color Analyzer (TV-2130: Minoltameter): 1EA

4) X-RAY Protector Circuit Operating Test Instruments

- DC Power Supplier (0-20V, 1A): 1EA

(3) SIGNAL

If there is no particular guidance, use the standard color signal (PM5514 Digital Signal) with 70dBu-80dBu.

(4) POWER SOURCE

AC110V ±20%, 220V ±20% (50/60Hz)

3. ADJUSTMENT

3-1. PIF/SIF BOARD ADJUSTMENT

1) Picture IF Trap Adjustment

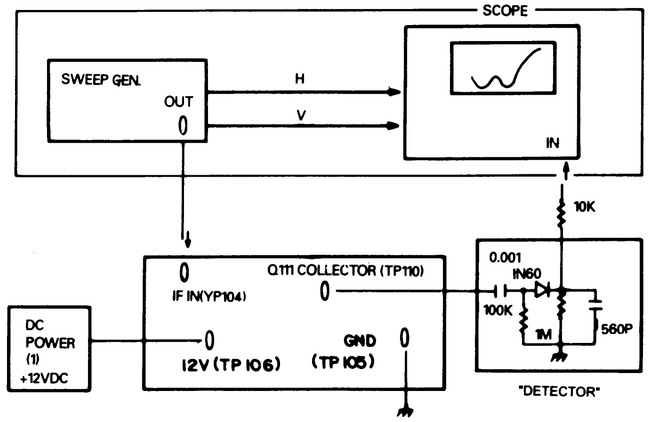

SCOPE
SWEEP GEN.
OUT
H
V
IN
10K
DC POWER (1) +12VDC
Q111 COLLECTOR (TP110)
IF IN(TP104)
12V (TP 106)
GND (TP 105)
0.001
IN60
100K
1M
560P
"DETECTOR"

Figure 1. Connection Diagram of Equipment

(1) Connect as shown in figure 1 and supply with power source (TP109: GND)

(2) Adjust L119 so that 33.5MHz marker (P-4.5MHz) point may be minimum.

(3) Adjust L118 so that 32.0MHz marker (P-6.0MHz) point may be minimum.

(Marker Frequency: 32.0, 33.5MHz)

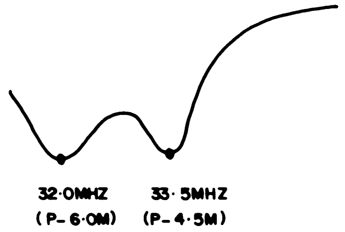


Figure 2

3-2. PIF/SIF ADJUSTMENT

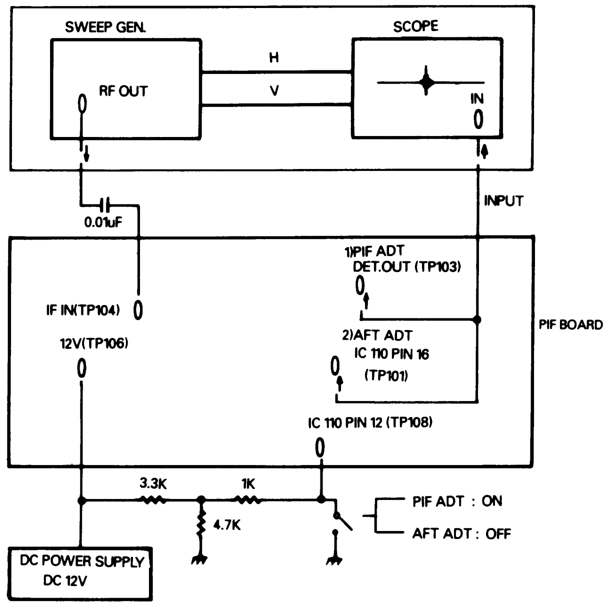

SWEEP GEN.
SCOPE
RF OUT
H
V
IN
INPUT
0.01uF
1)PIF ADT DET.OUT (TP103)
IF IN(TP104)
12V(TP106)
2)AFT ADT IC 110 PIN 16 (TP101)
PIF BOARD
IC 110 PIN 12 (TP108)
3.3K
1K
4.7K
PIF ADT : ON
AFT ADT : OFF
DC POWER SUPPLY DC 12V

Figure 3. PIF and AFT Adjustment

1) PIF Adjustment

(1) Connect as shown in figure 3, and then DC power supplies on.

(2) Adjust the Gain Control Knob of Alignment Scope so that Beat Output may become proper as shown in figure 4.

(3) Adjust L115 so that Beat Waveform and Marker point (38.0MHz) may be on the same location as shown in figure 4.

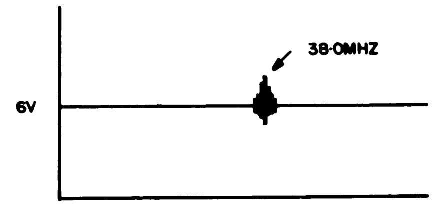


Figure 4

2) AFT Adjustment

(1) After finishing PIF adjustment, move input terminal of Scope to the pin 16 of IC110.

(2) Adjust the Gain Control Knob to be proper.

(3) Adjust L117 so that the scope waveform should be as shown in figure 5.

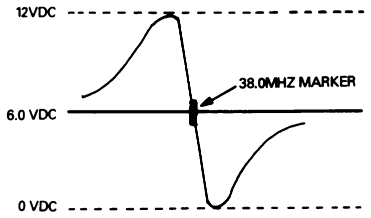


Figure 5

3) SIF Adjustment

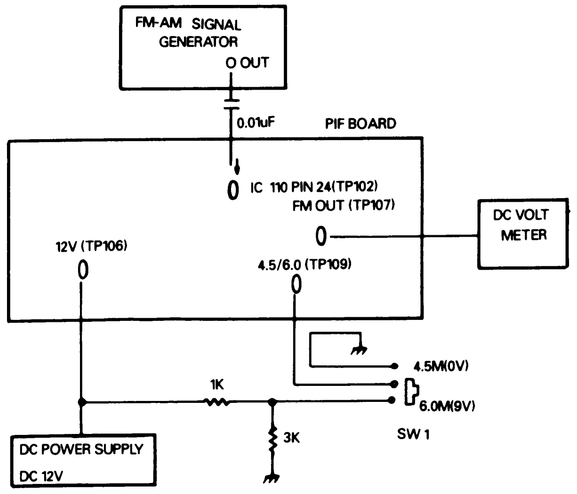


Figure 6

(1) 6.0 MHz ADJUSTMENT

- Connect the 6.0MHz signal of FM-AM Signal Generator to pin 24 of IC110 through a condenser 0.01uF. (Modulation: 400Hz/15KHz deviation 100dBu)
- SW1 sets in 6.0MHz.
- Connect the DC voltmeter to FM OUT (TP107)
- Adjust L113 so that the reading on the DC voltmeter may become DC 5.5 ± 0.5V.

(2) 4.5MHz ADJUSTMENT

- SW1 sets in 4.5MHz.
- Connect the 4.5MHz signal of SIF IN to pin 24 of IC110 (SIF IN Terminal) (Modulation: 400Hz/30KHz deviation 100dBu)
- Connect the DC voltmeter to FM OUT (TP107)
- Adjust VC110 so that the reading on the DC voltmeter may become DC 5.5 ± 0.5V.

3-3. SYSTEM CONVERTER BOARD ADJUSTMENT

1) 6.0MHz SIF OSC. Coil(L151) Adjustment

(1) Supply +12V to the System Converter Board (TP151).

(2) Connect a 10KΩ resistor between pin 18 and 19 of IC151.

(3) Apply the 6.0MHz signal (No modulation, 100dBu) of FM-AM Signal Generator output to Base of Q156 through a condenser 0.01uF.

(4) Connect oscilloscope to pin 9 of IC151.

(5) Adjust L151 so that the response on oscilloscope can be maximum.

(6) Remove the 10KΩ resistor between pin 18 and 19 after finishing adjustment.

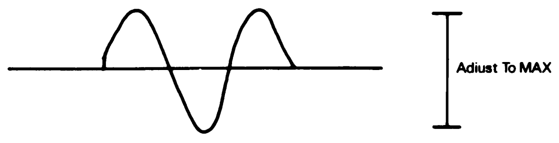


Figure 7

2)5.5MHz SIF OSC. Coil (L152) Adjustment

(1) Supply +12VDC to the System Converter Board (TP151).

(2) Supply +12VDC VB terminal (TP154) through a 10K ohm resistor.

(3) Apply the 5.5MHz signal (No modulation, 100dBu) of FM-AM Signal Generator Output to the position which Z157 output and C157 meet at.

(4) Connect DC voltmeter to pin 18 of IC151.

(5) Adjust L152 so that the response on DC voltmeter may become 4.5+0, -0.2VDC.

3-4. +B VOLT POWER SUPPLY ADJUSTMENT (VR801, VR851)

1) +B Adjustment of Stand-By (VR801)

(1) Set the stand-by (AC Input: 230V, 50Hz)

(2) Connect the terminal(+) of Digital-Multimeter to TP851 (J809) and terminal(-) to V.OUT Heat Sink Plate (IC301).

(3) Adjust VR801 to be 120 ±0.2VDC.

2) VR851 Adjustment

(1) Receive the standard PAL signal (CH5 Digital Pattern) and set the Contrast 80%, Brightness 65%, Color 50%.

(2) Check if the AC input is 230V, 50Hz.

(3) Connect the terminal(+) of Digital-Multimeter to TP851 (J809) and terminal(-) to V.OUT Heat Sink Plate (IC301).

(4) Adjust VR851 to be 120 ±0.2VDC.

3-5. VERTICAL HEIGHT ADJUSTMENT (VR301)

(1) Receive the standard PAL color signal; (CH5 digital pattern).

(2) Set the Contrast 80%, and Brightness 65%, Colour 50%.

(3) Adjust VR301 so that the circle may be reached at position of 4 ±1 mm distance from top and bottom of the effective screen.

3-6. VERTICAL CENTER ADJUSTMENT (SW301)

(1) Receive the standard color signal.

(2) Adjust the SW301 so that the electrical center of the picture may get to concur with the center of a mechanical center of CPT screen vertically.

3-7. HORIZONTAL CENTER ADJUSTMENT (VR401)

(1) Receive the standard PAL color signal.

(2) Adjust the VR401 so that the electrical center of the picture may get to concur with the center of a mechanical center of CPT screen horizontally.

3-8. RF AGC ADJUSTMENT (VR110)

(1) Receive the standard PAL color signal. (60dBu ±1dBu)

(2) Connect the Digital-Multimeter to TP106.

(3) Adjust VR110 so that maybe 4.8±0.1VDC.

3-9. FOCUS ADJUSTMENT

(1) Receive the standard PAL color signal.

(2) Adjust the FOCUS V/R of FBT for well defined vertical scanning lines in the center area of the screen.

3-10. BELL FILTER COIL (L503) ADJUSTMENT

(1) Receive SECAM color bar signal. (60-80dBu).

(2) Adjust the above signal so that Contrast may be 80%, Brightness 65% and Color 50%.

(3) Connect the scope to pin 18 of IC501.

(4) Adjust L503 for the flat level of amplitude in each color bar waveform on the scope. (See figure 8)

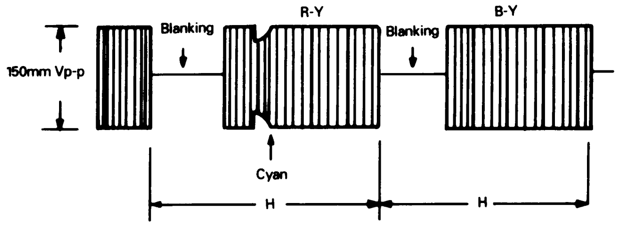


Figure 8

3-11. SECAM IDENT COIL (L504) ADJUSTMENT

(1) Receive the standard SECAM color bar signal (60-80dBu).

(2) Connect the Digital Voltmeter to pin 23 of IC501.

(3) Adjust L504 so that the reading on the DC voltmeter may become 8.5 ± 0. 1VDC.

(4) In case of Line Ident Mode, adjust it to be 7.0 ± 0.1VDC. (R525:open)

3-12. SECAM (B-Y, R-Y) DISCRIMINATOR COIL (L500,L501) ADJUSTMENT

(1) Receive the standard SECAM color bar signal (Leave the contrast and brightness, color controls free)

(2) Connect the scope to TP501 (pin 62 of IC501)

(3) Adjust L500 so that the white level in picture part may get to concur with the vertical retrace line (See figure 9)

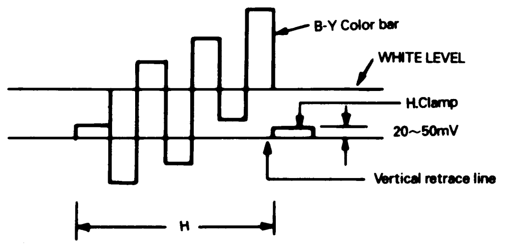


Figure 9

(4) Connect the scope to TP502 (pin 60 of IC501).

(5) Adjust L501 so that the white level in picture part may reach to the vertical retrace line (See figure 10.)

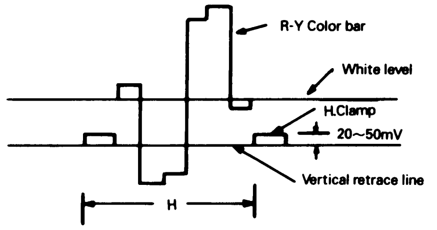


Figure 10

3-13. PAL MATRIX ADJUSTMENT (L509, VR501)

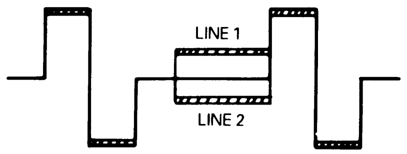
(1) Receive the DEM. signal of the standard PAL.

(2) Connect the Oscilloscope probe to TP503.

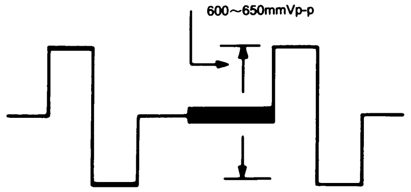
(3) Adjust L509 so that the LINE 1 and the LINE 2 may be on the same level(See figure 11)

(4) Adjust VR501 to minimize the venetian blind (Approx: 600-650m Vp-p)

(5) If venetian blind appears after this adjustment, repeat above STEP 3 and 4.



Before Adjustment



After Adjustment

Figure 11

3-14. SCREEN AND WHITE BALANCE ADJUSTMENT

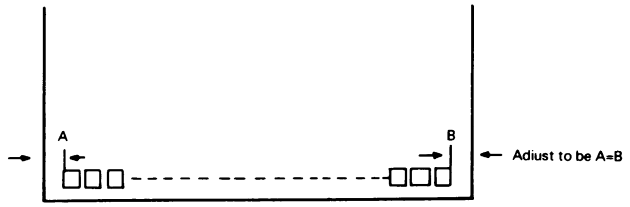
(1) Set the VR901,902,903,904,905 on the CPT Board and SUB-Bright (VR503) on MAIN PCB to the mechanical center position.
(2) Set the color volume to the MIN.
(3) After a normal operation do this adjustment in the preheated state for above 15 minutes at least.
(4) Receive the DEM signal of the standard PAL (color-less pattern of philips GEN)
(5) Set the service SW(SW501) to stop the vertical oscillation (That is, to obtain horizontal line).
(6) Turn the screen VR counterclockwise and set it to the minimum position.
(7) Turn the screen VR clockwise slowly to obtain a horizontal line on screen.
(8) Adjust the CUT-OFF VR(VR901, 902, 903) so that the horizontal line on screen may become white except the colour appearing on the horizontal line.
(9) Turn the screen VR counterclockwise to obtain a horizontal line on screen.
(10) Set SW301 to the normal position.
(11) Set the Contrast, Brightness VR to be maximum.
(12) Adjust VR904 and VR905 on the CPT Board so as to obtain the white screen in the high light areas (color temperature 10000° ±800° K).
(As using minoltameter (TV-2130), adjust it to be X=281 ±8, Y=288 ± 8)
(13) Adjust Contrast and Brightness and then conform whether you have a good adjustment in a high and low light part.
(14) Otherwise, re-adjust above item 5-13.

3-15. SUB-BRIGHTNESS ADJUSTMENT (VR502)

(1) This adjustment must be done after white balance adjustment.
(2) Operate the receiver and receive the Standard PAL pattern signal.
(3) Set the Contrast (80%) and Brightness (65%), Color (50%) to be minimum.
(4) Adjust VR503 until just before so that the screen may become CUT-OFF.

3-16. HORIZONTAL DIRECTION ADJUSTMENT OF ON-SCREEN LETTER

(1) Receive the standard color signal.
(2) Push the Picture Key or Volume Key on the remote control unit.
(3) Adjust L1 so that the locations of the level bar can keep the same distance right and left each.



3-17. PIP(Picture in Picture) BOARD ADJUSTMENT

This adjustment is applicable to the model with PIP BOARD and must be done after TV receiver adjustment.

1.CONNECTION

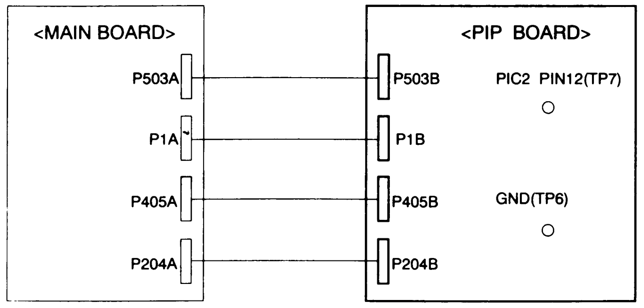


Figure 12

2.HORIZONTAL-SYNC. ADJUSTMENT

(1) Connect each pin as shown in figure 12 and supply power source to the TV receiver.
(2) Make the antenna terminal not receive any signal.
(3) Push the "ON/OFF" key on the remote control unit which is called with PIP POWER BUTTON.
(4) Connect pin 12(TP7) of PIC2 to the ground(TP6).
(5) Connect the frequency counter (FC-7102, GOLD-STAR) to pin4(TP8) of PIC2.
(6) Adjust PVR1(H-SYNC.) so that the horizontal frequency may be 15680±15HZ.
(7) Disconnect pin12(TP7) of PIC2 from the ground.

3-17-1. PIP PAL COLOR SYNC. (8.86MHZ) ADJUSTMENT USING PVC2

(1) Connect each pin as shown in figure 12 and supply the power source to the TV receiver.
(2) Supply the PAL COLOR BAR signal to the antenna terminal.
(3) Push the "ON/OFF" key on the remote control unit.
(4) Adjust a variable capacitor PVC2 slowly so that color may appear on the screen of the TV receiver.
(5) Connect pin 17(TP2) of PIC7 to the ground(TP1).
(6) Adjust a variable capacitor PVC2 so that the color may not flow.
(7) Disconnect the pin 17(TP2) of PIC7 from ground.

3-17-2. PIP NTSC COLOR SYNC. (7.15900MHz) ADJUSTMENT USING PVC1

(1) Connect each pin as shown in figure 12 and supply power source to the TV receiver.
(2) Supply the NTSC COLOR BAR signal to the antenna terminal.
(3) Push the "ON/OFF" key on the remote control unit.
(4) Adjust a variable capacitor PVC1 slowly so that color may appear on the screen of the TV receiver.
(5) Connect pin 17(TP2) of PIC7 to the ground(TP1).
(6) Adjust a variable capacitor PVC1 so that the color may not flow.
(7) Disconnect the pin 17(TP2) of PIC7 from ground.

3-17-3. PIP SECAM BELL FILTER ADJUSTMENT USING PL9

1.CONNECTION

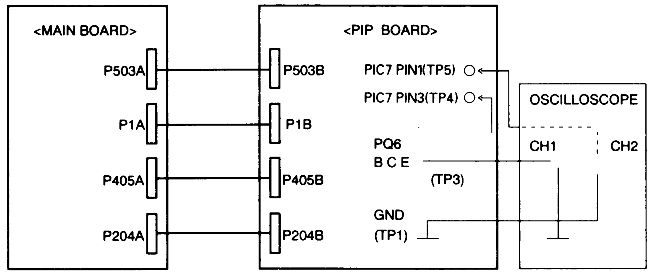


Figure 13

(1) Connect each pin as shown in figure 13 and supply power source to the TV receiver.
(2) Supply the SECAM COLOR BAR signal to the antenna terminal.
(3) Push the "ON/OFF" key on the remote control unit.
(4) Adjust PL9 so that the amplitude of the difference signal may be flat during two line scanning period closed as shown in figure 14.

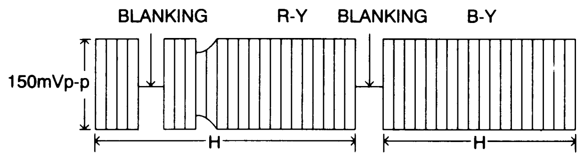


Figure 14

3-17-4. SECAM (B-Y, R-Y) DISCRIMINATION ADJUSTMENT USING PVR2 AND PL10

(1) Connect each pin as shown in figure 13.
(2) Connect CH1 to pin 3 of PIC7(TP4) and CH2 to pin 1(TP5), and then supply the power source to the TV receiver.
(3) Push the "ON/OFF" key on the remote control unit.
(4) Adjust PVR2(R-Y)and PL10(B-Y) so that the white level of the picture parts(R-Y and B-Y) may be equal to the vertical retrace line.

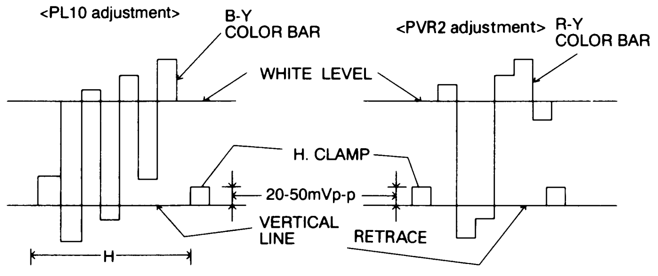


Figure 15

3-18. APC ADJUSTMENT

(1) Push the "APC" key on the remote control unit so that the contrast may be 80%, brightness may be 65% and color may be 50%.
(2) EEPROM OPTION ADJUSTMENT
    1. Push the "APC" key on the remote control unit.
    2. Push the "ADDRESS" key referring to the below table.
    ∗ TABLE

OPTION CONTENT	DIRECT ADDRESS ON TX
LOGO(○), VOLUME UP/DOWN(○), NO SIGNAL-SOUND(○)	1
LOGO(○), VOLUME UP/DOWN(○), NO SIGNAL-SOUND(×)	2
LOGO(○), VOLUME UP/DOWN(×), NO SIGNAL-SOUND(○)	3
LOGO(○), VOLUME UP/DOWN(×), NO SIGNAL-SOUND(×)	4
LOGO(×), VOLUME UP/DOWN(○), NO SIGNAL-SOUND(○)	5
LOGO(×), VOLUME UP/DOWN(○), NO SIGNAL-SOUND(×)	6
LOGO(×), VOLUME UP/DOWN(×), NO SIGNAL-SOUND(○)	7
LOGO(×), VOLUME UP/DOWN(×), NO SIGNAL-SOUND(×)	8

    3. Push the "ENTER" key or "▶" key on the remote control unit.

PURITY AND CONVERGENCE ADJUSTMENT

CAUTION: Convergence and Purity have been factory aligned. Do not attempt to tamper with these alignments. However, the effects of adjacent receiver components, or replacement of picture tube or deflection yoke may require the need to readjust purity and convergence. Convergence magnet assembly and rubber wedges need mechanical positioning following the figure 16. Before attempting any convergence adjustments this receiver should be operated for at least fifteen minutes. If adjustment is required the adjustments should be made in the following sequence.

COLOUR PURITY ADJUSTMENT

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Turn the CONTRAST and BRIGHTNESS controls to maximum.
3. Select the purity pattern consisted of green only on the pattern generator.
4. Loosen the clamp screw holding the yoke, and slide the yoke backward to provide vertical green belt (zone) in the picture screen.
5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet (See figure 17) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, center the raster vertically.
7. Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check purity of the red and blue rasters by selecting the purity pattern of pattern generator.
9. Obtain a white raster, referring to "WHITE BALANCE ADJUSTMENT".
10. Proceed with convergence adjustment.

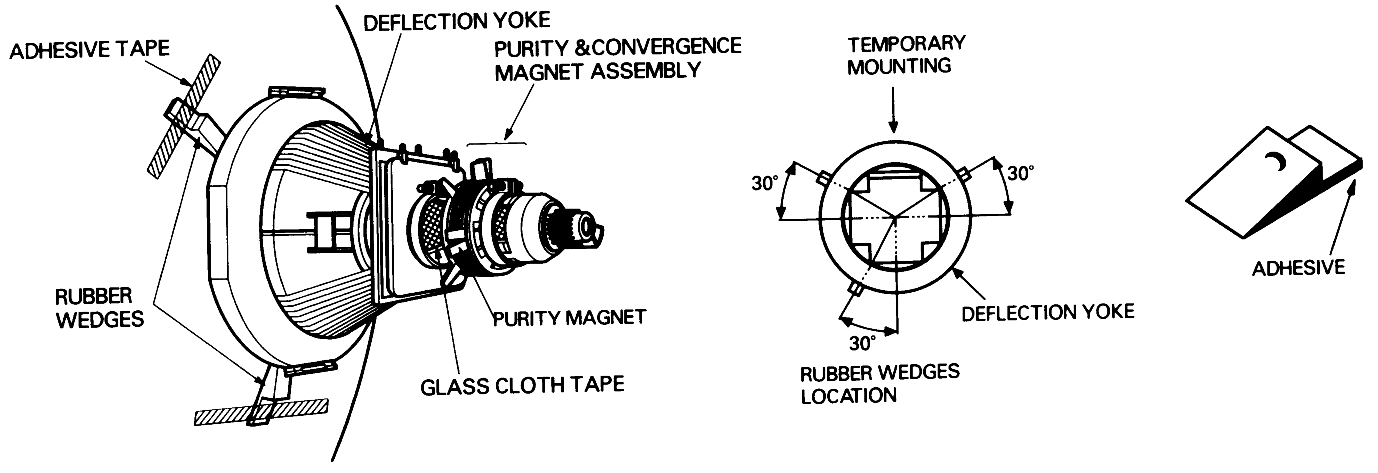

DEFLECTION YOKE
ADHESIVE TAPE
PURITY &CONVERGENCE MAGNET ASSEMBLY
RUBBER WEDGES
PURITY MAGNET
GLASS CLOTH TAPE
TEMPORARY MOUNTING
30°
30°
30°
DEFLECTION YOKE
RUBBER WEDGES LOCATION
ADHESIVE

Figure 16

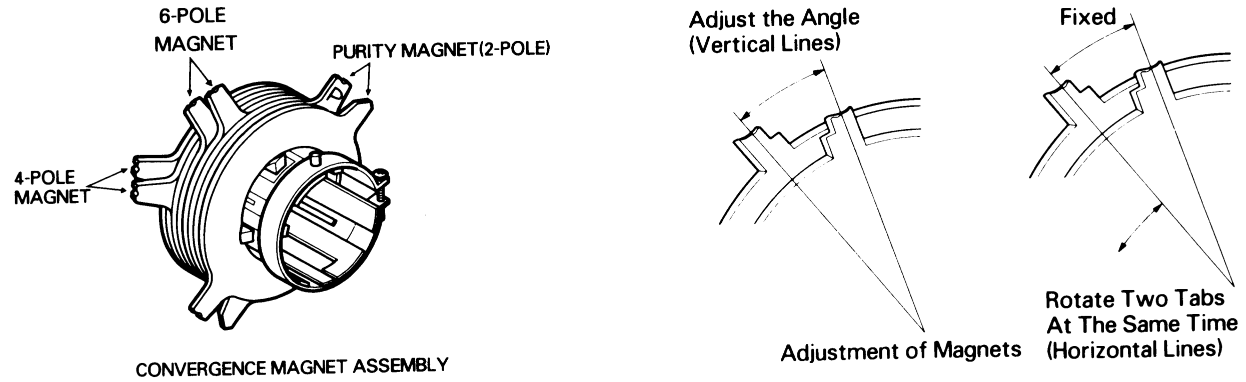

6-POLE MAGNET
PURITY MAGNET(2-POLE)
4-POLE MAGNET
CONVERGENCE MAGNET ASSEMBLY
Adjust the Angle (Vertical Lines)
Fixed
Adjustment of Magnets
Rotate Two Tabs At The Same Time (Horizontal Lines)

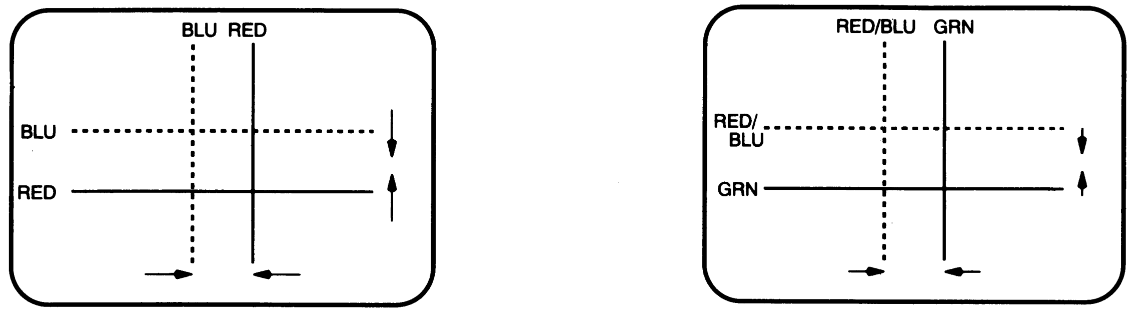
Figure 17

CENTER CONVERGENCE ADJUSTMENT

1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST controls for well defined pattern.
3. Adjust two tabs of the 4-pole magnets to change the angle between them (See figure 17) and superimpose the red and blue vertical lines in the center area of the picture screen. (See figure 18)
4. Turn both tabs at the same time keeping their angles constant to superimpose red and blue horizontal lines at the center of the screen. (See figure 18)
5. Adjust two tabs of 6-pole magnets to superimpose red/blue line with green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 1,2,3, keeping in mind red, green and blue movements, because 4-Pole magnets and 6-Pole magnets interact and make dot movement complex.

CIRCUMFERENCE CONVERGENCE ADJUSTMENT

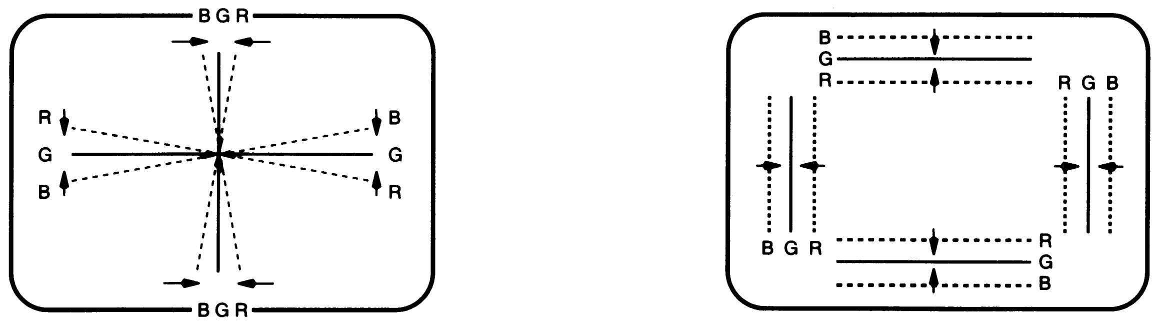
1. Loosen the clamping screw of DY to allow the yoke to tilt.
2. Adjust DY to obtain a better convergence in the circumference by orbital movement of the front of the yoke, then secure the DY in appropriate position by placing the placing the wedges as illustrates in figure 18. Tighten screw holding the DY. Stick 3 adhesive tapes on wedges as shown in figure 16.


BLU RED
BLU
RED
RED/BLU GRN
RED/ BLU
GRN

4-Pole Magnets Movement

6-Pole Magnets Movement

Center Convergence by Convergence Magnets


B G R
R
G
B
B
G
R
B G R
B
G
R
R G B
B G R
R
G
B

Incline the Yoke up (or down)

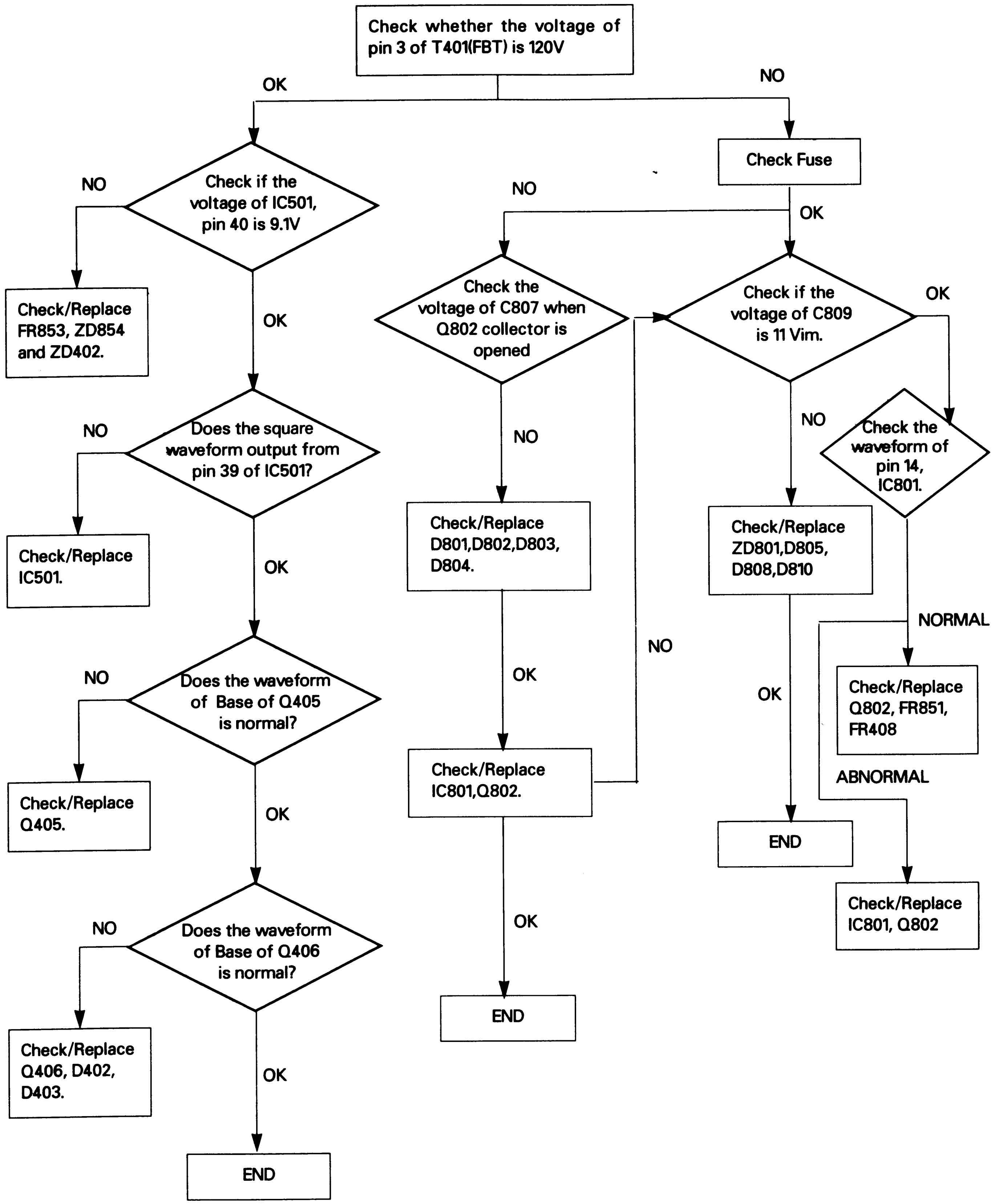
Incline the Yoke right (or left)

Circumference Convergence by Deflection Yoke

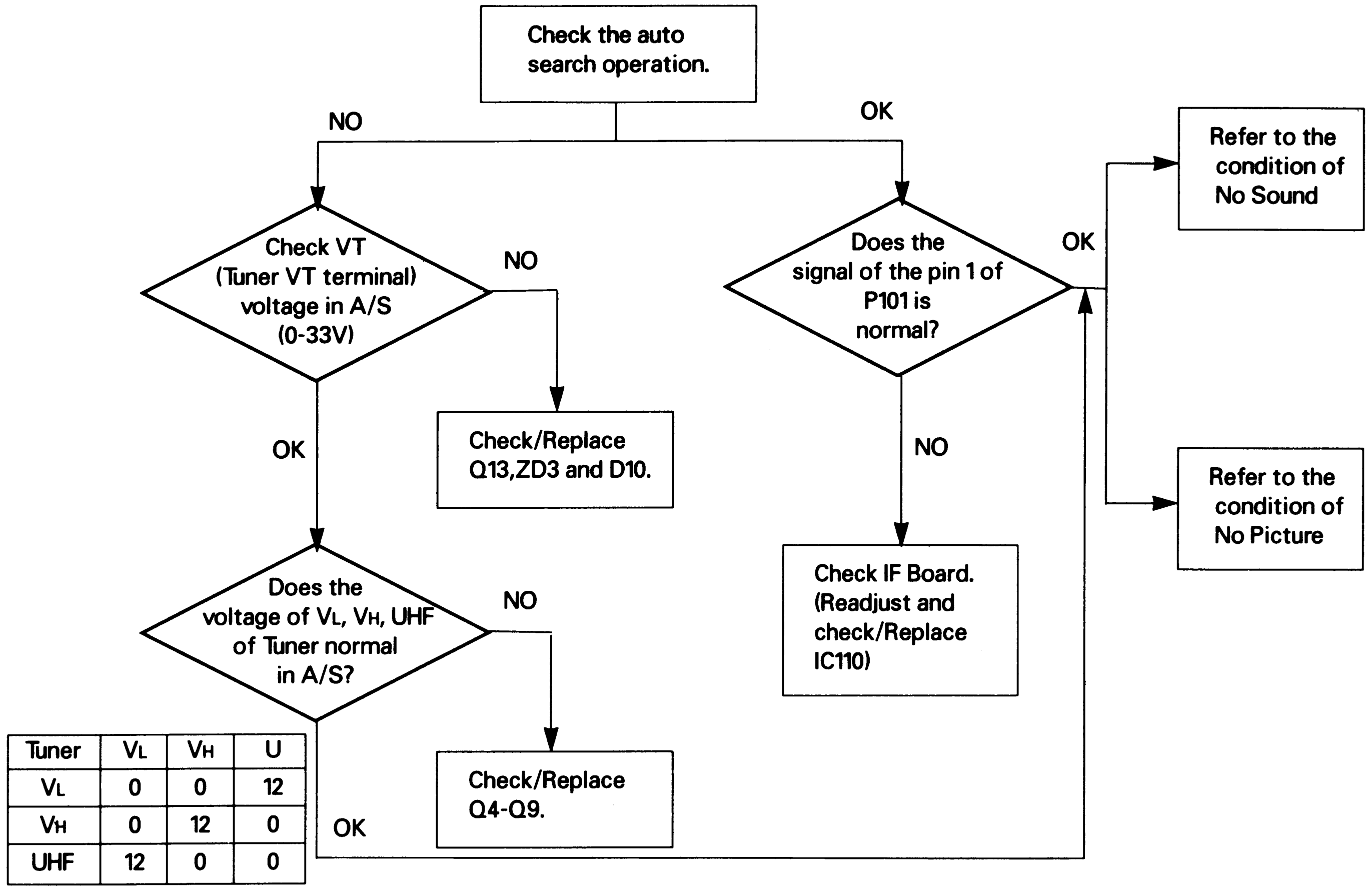
Figure 18. DOT MOVEMENT PATTERN

TROUBLESHOOTING GUIDE

1. NO RASTER

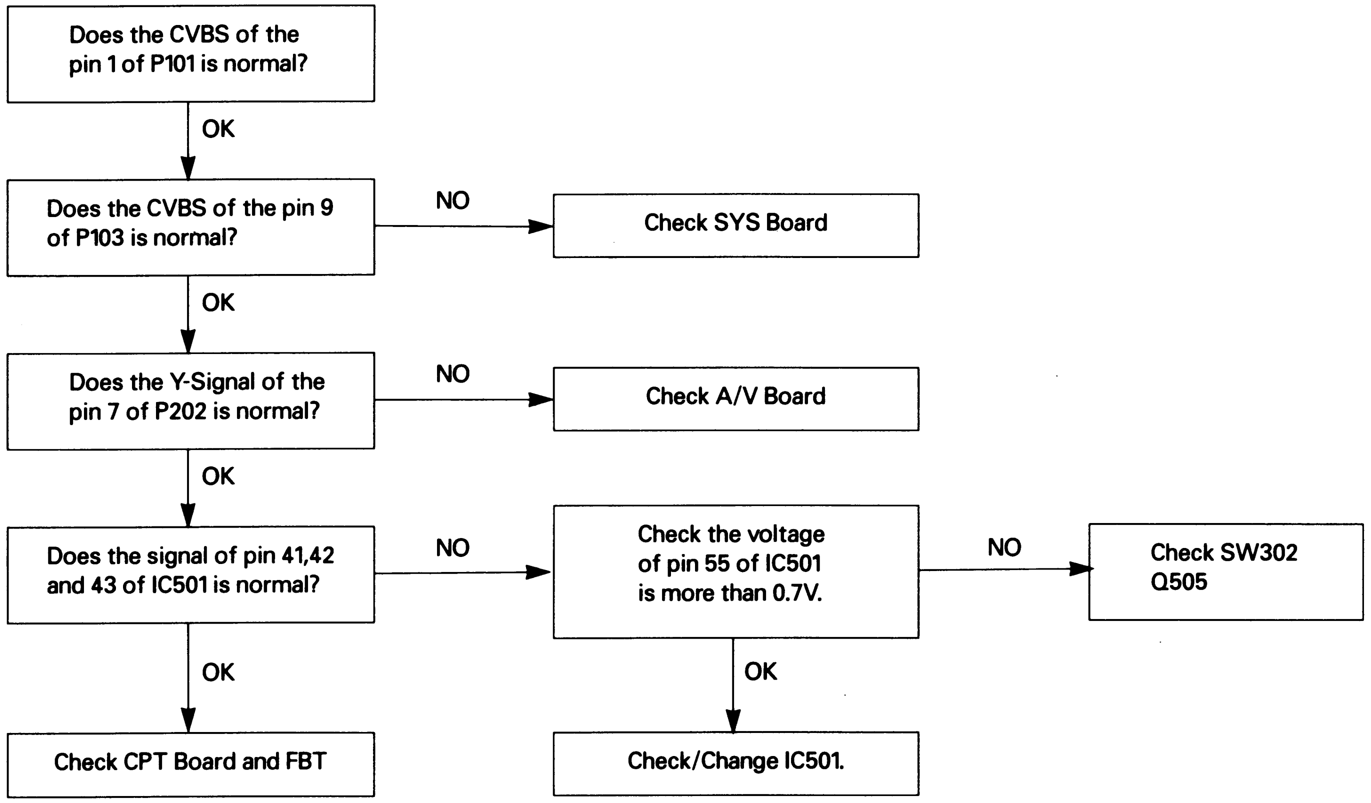

Check whether the voltage of pin 3 of T401(FBT) is 120V
OK
NO
Check if the voltage of IC501, pin 40 is 9.1V
NO
Check/Replace FR853, ZD854 and ZD402.
OK
Does the square waveform output from pin 39 of IC501?
NO
Check/Replace IC501.
OK
Does the waveform of Base of Q405 is normal?
NO
Check/Replace Q405.
OK
Does the waveform of Base of Q406 is normal?
NO
Check/Replace Q406, D402, D403.
OK
END
Check Fuse
NO
OK
Check the voltage of C807 when Q802 collector is opened
NO
Check/Replace D801,D802,D803, D804.
OK
Check/Replace IC801,Q802.
OK
END
NO
Check if the voltage of C809 is 11 Vim.
OK
NO
Check/Replace ZD801,D805, D808,D810
OK
END
Check the waveform of pin 14, IC801.
NORMAL
Check/Replace Q802, FR851, FR408
ABNORMAL
Check/Replace IC801, Q802

2. NO SOUND, NO PICTURE (RASTER OK)

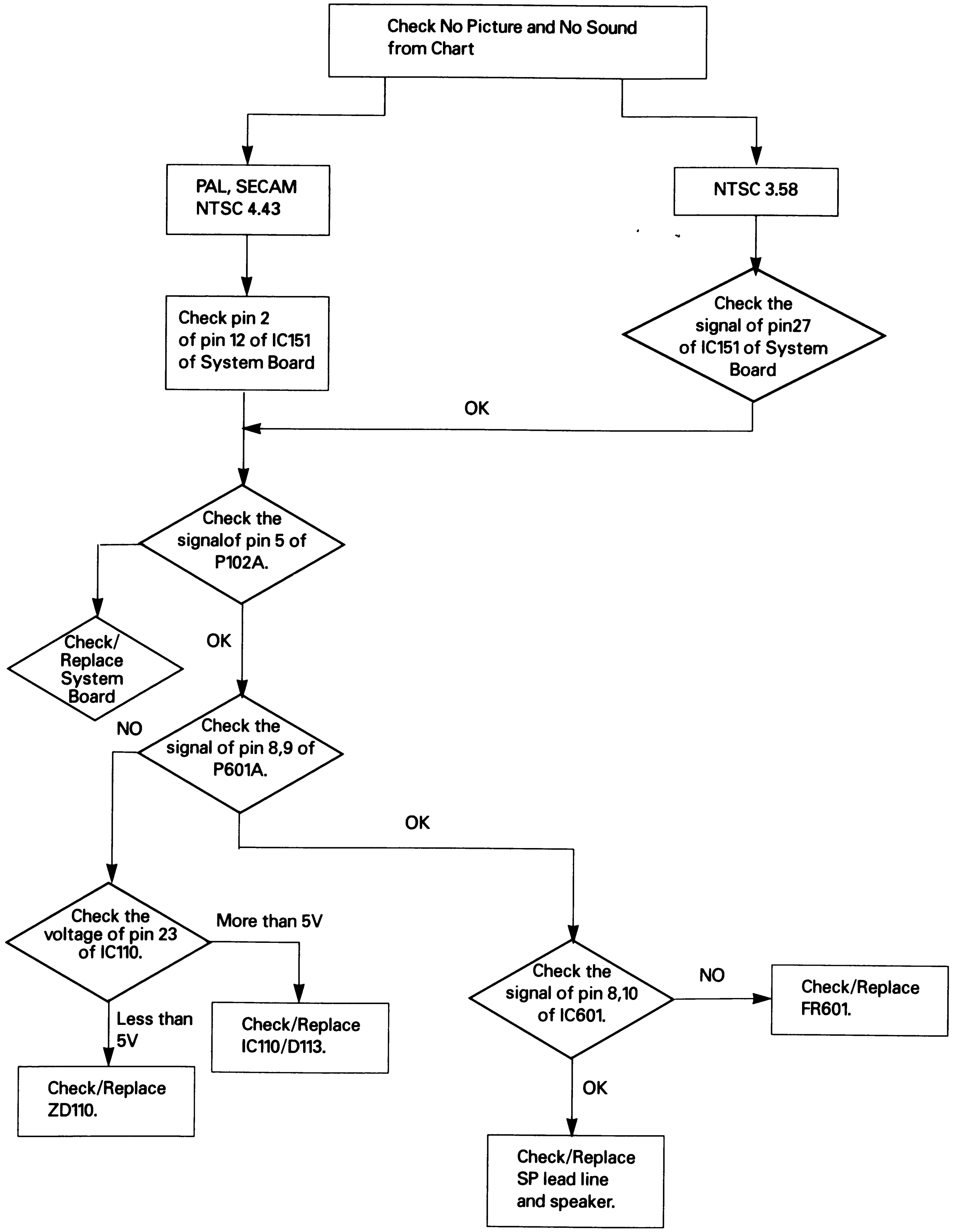

Check the auto search operation.
NO
OK
Check VT (Tuner VT terminal) voltage in A/S (0-33V)
NO
Check/Replace Q13,ZD3 and D10.
OK
Does the voltage of VL, VH, UHF of Tuner normal in A/S?
NO
Check/Replace Q4-Q9.
OK
Does the signal of the pin 1 of P101 is normal?
OK
Refer to the condition of No Sound
Refer to the condition of No Picture
NO
Check IF Board. (Readjust and check/Replace IC110)

Tuner	V_L	V_H	U
V_L	0	0	12
V_H	0	12	0
UHF	12	0	0

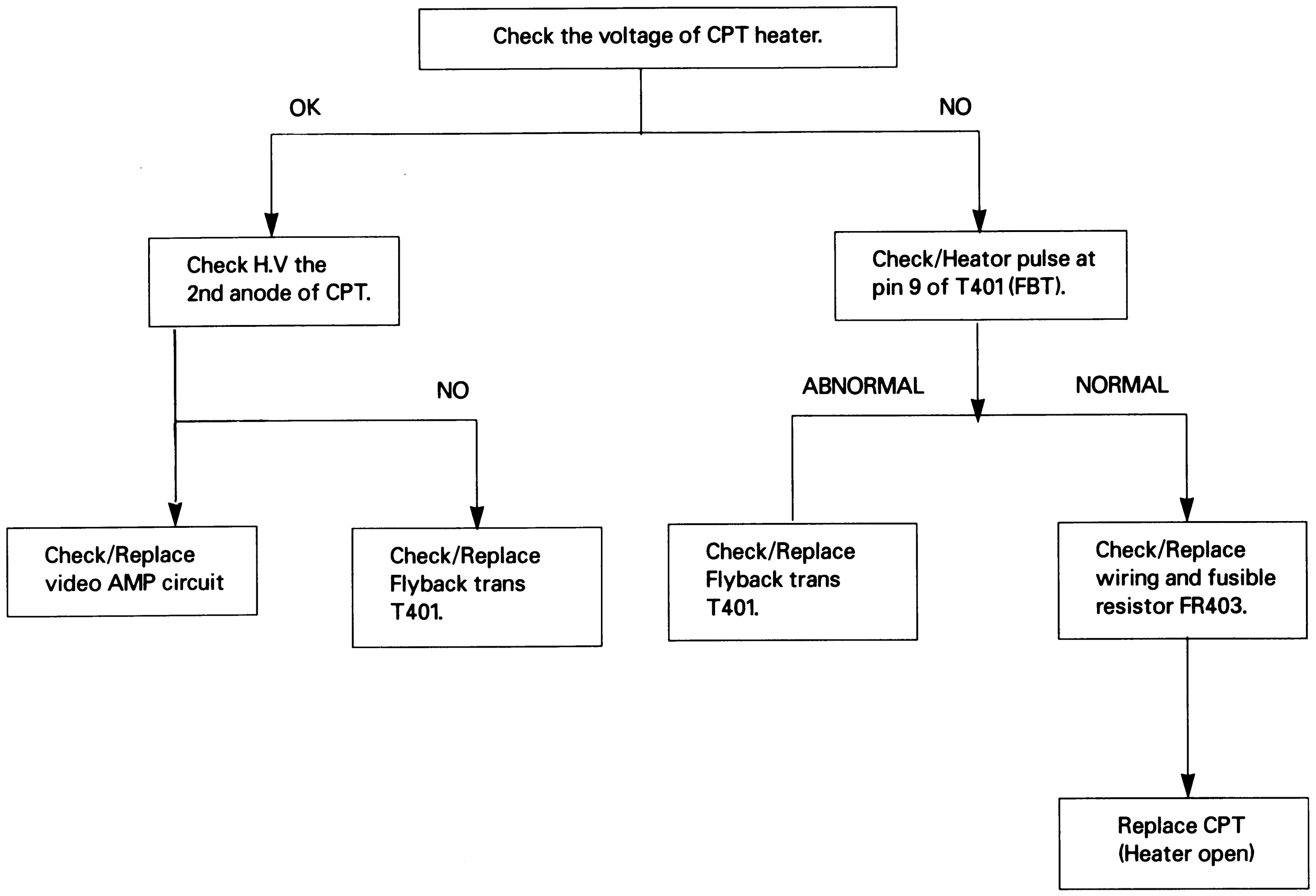
3. NO PICTURE


Does the CVBS of the pin 1 of P101 is normal?
OK
Does the CVBS of the pin 9 of P103 is normal?
NO
Check SYS Board
OK
Does the Y-Signal of the pin 7 of P202 is normal?
NO
Check A/V Board
OK
Does the signal of pin 41,42 and 43 of IC501 is normal?
NO
Check the voltage of pin 55 of IC501 is more than 0.7V.
NO
Check SW302 Q505
OK
Check/Change IC501.
OK
Check CPT Board and FBT

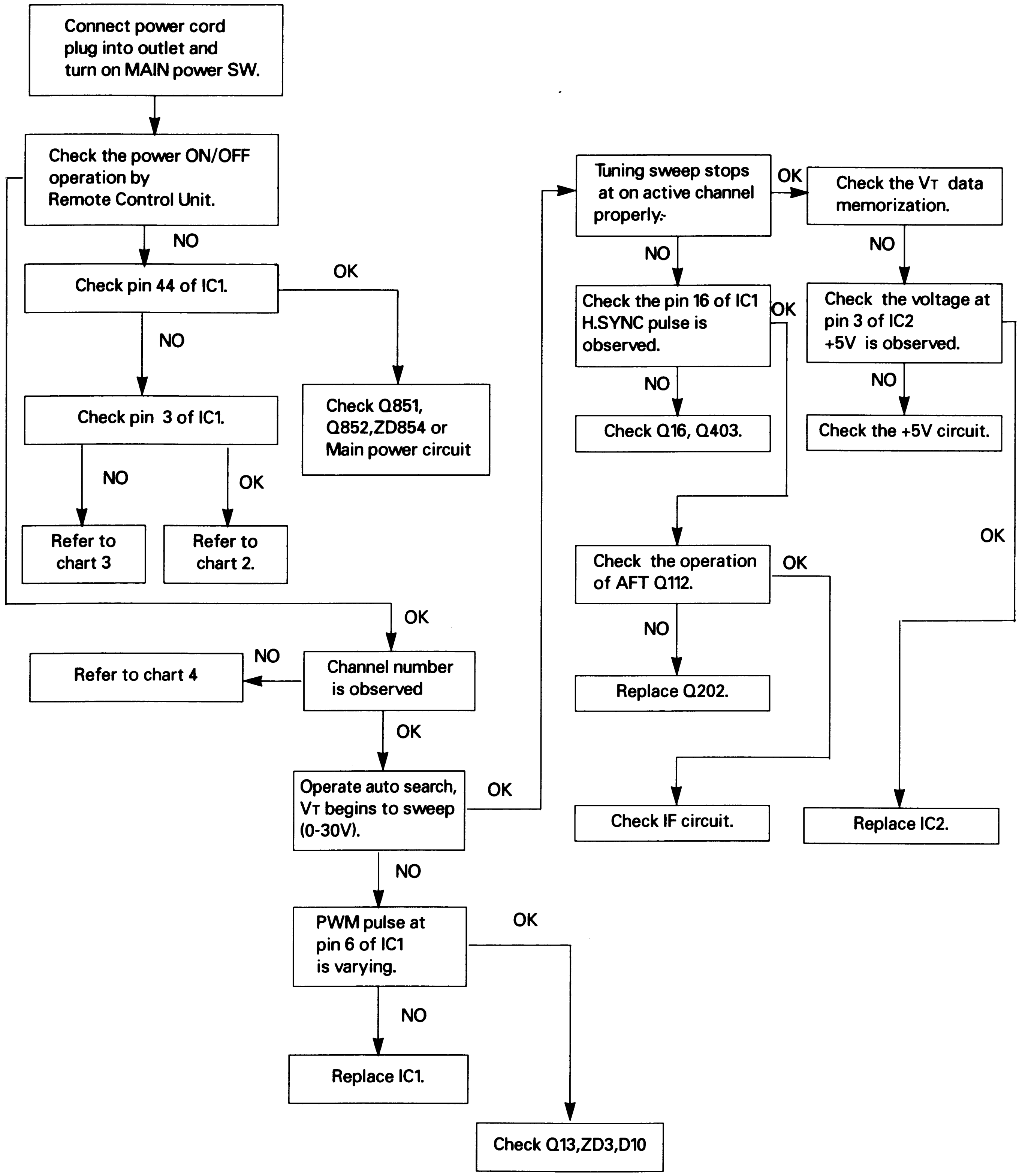
4. NO SOUND


Check No Picture and No Sound from Chart
PAL, SECAM NTSC 4.43
NTSC 3.58
Check pin 2 of pin 12 of IC151 of System Board
Check the signal of pin27 of IC151 of System Board
OK
Check the signalof pin 5 of P102A.
Check/ Replace System Board
OK
NO
Check the signal of pin 8,9 of P601A.
OK
Check the voltage of pin 23 of IC110.
More than 5V
Less than 5V
Check/Replace IC110/D113.
Check/Replace ZD110.
Check the signal of pin 8,10 of IC601.
NO
Check/Replace FR601.
OK
Check/Replace SP lead line and speaker.

5. NO RASTER (SOUND OK)

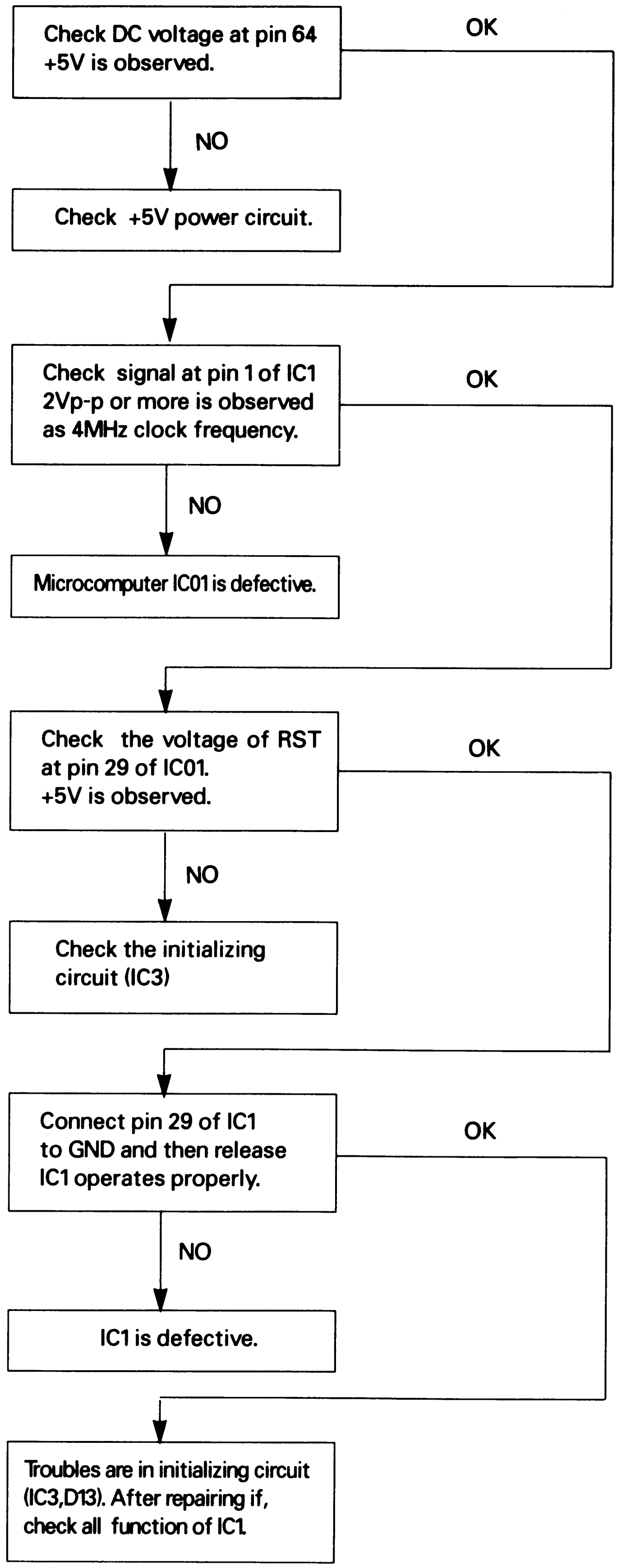

Check the voltage of CPT heater.
OK
NO
Check H.V the 2nd anode of CPT.
Check/Heator pulse at pin 9 of T401 (FBT).
NO
ABNORMAL
NORMAL
Check/Replace video AMP circuit
Check/Replace Flyback trans T401.
Check/Replace Flyback trans T401.
Check/Replace wiring and fusible resistor FR403.
Replace CPT (Heater open)

6. CHANNEL SELECTOR TROUBLE (CHART 1)


Connect power cord plug into outlet and turn on MAIN power SW.
Check the power ON/OFF operation by Remote Control Unit.
NO
Check pin 44 of IC1.
OK
Check Q851, Q852,ZD854 or Main power circuit
NO
Check pin 3 of IC1.
NO
OK
Refer to chart 3
Refer to chart 2.
OK
Refer to chart 4
NO
Channel number is observed
OK
Operate auto search, VT begins to sweep (0-30V).
OK
NO
PWM pulse at pin 6 of IC1 is varying.
OK
NO
Replace IC1.
Check Q13,ZD3,D10
Tuning sweep stops at on active channel properly.
OK
Check the VT data memorization.
NO
NO
Check the pin 16 of IC1 H.SYNC pulse is observed.
OK
Check the voltage at pin 3 of IC2 +5V is observed.
NO
NO
Check Q16, Q403.
Check the +5V circuit.
OK
Check the operation of AFT Q112.
OK
NO
Replace Q202.
Check IF circuit.
Replace IC2.

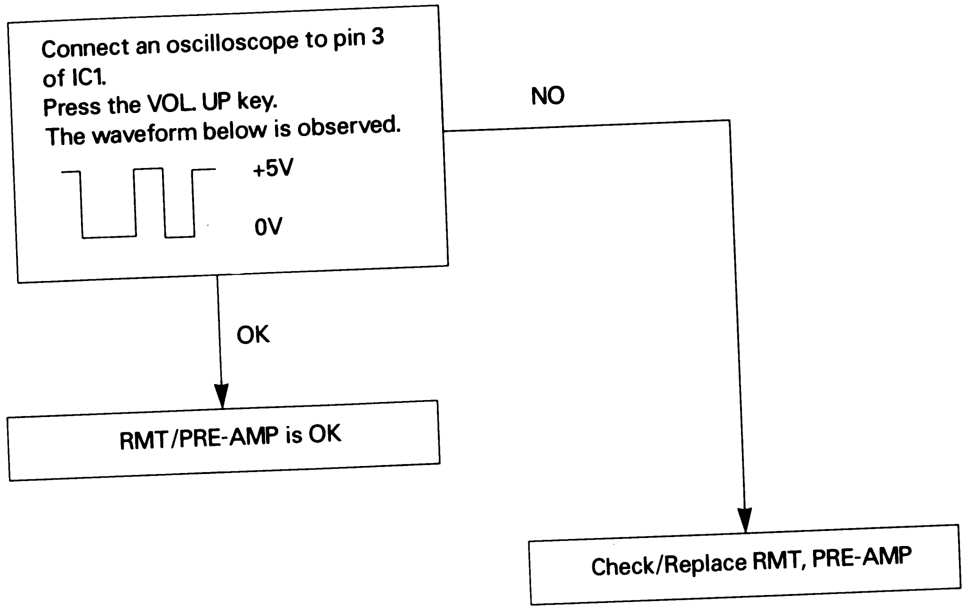
Microcomputer (IC01) Operation Check (CHART 2)

For Checking Microcomputer check that control buttons and their connection work properly.


Check DC voltage at pin 64 +5V is observed.
OK
NO
Check +5V power circuit.
Check signal at pin 1 of IC1 2Vp-p or more is observed as 4MHz clock frequency.
OK
NO
Microcomputer IC01 is defective.
Check the voltage of RST at pin 29 of IC01. +5V is observed.
OK
NO
Check the initializing circuit (IC3)
Connect pin 29 of IC1 to GND and then release IC1 operates properly.
OK
NO
IC1 is defective.
Troubles are in initializing circuit (IC3,D13). After repairing if, check all function of IC1.

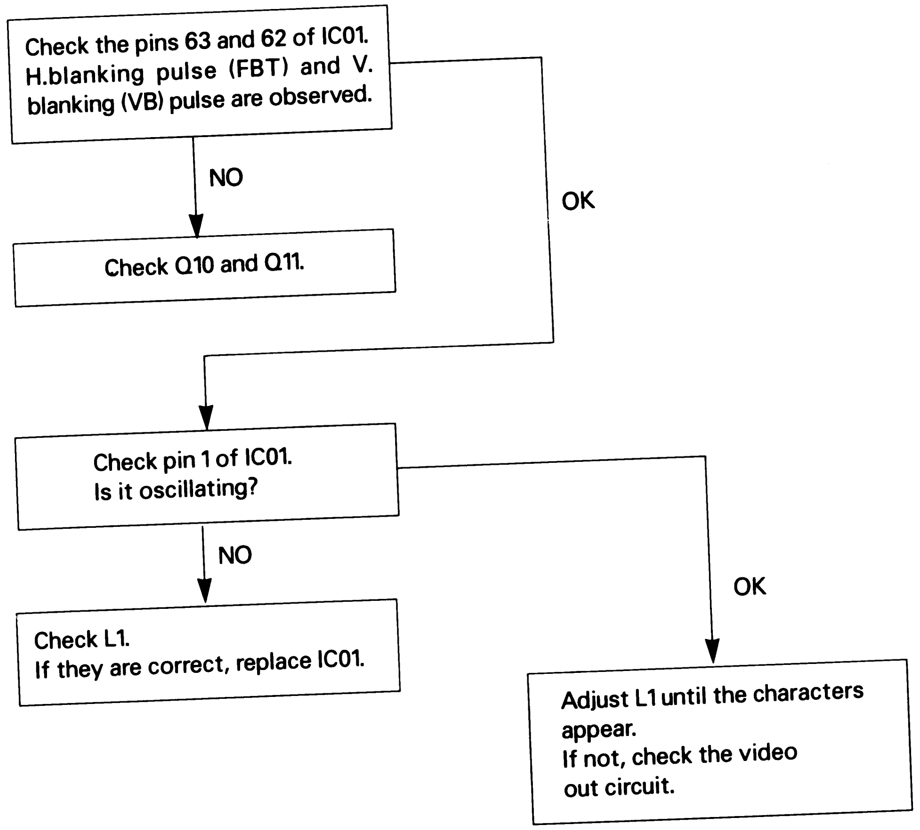
Remote Control Operation Check (CHART 3)

Note: Before checking RMT operation, check that key operation on TV set properly.

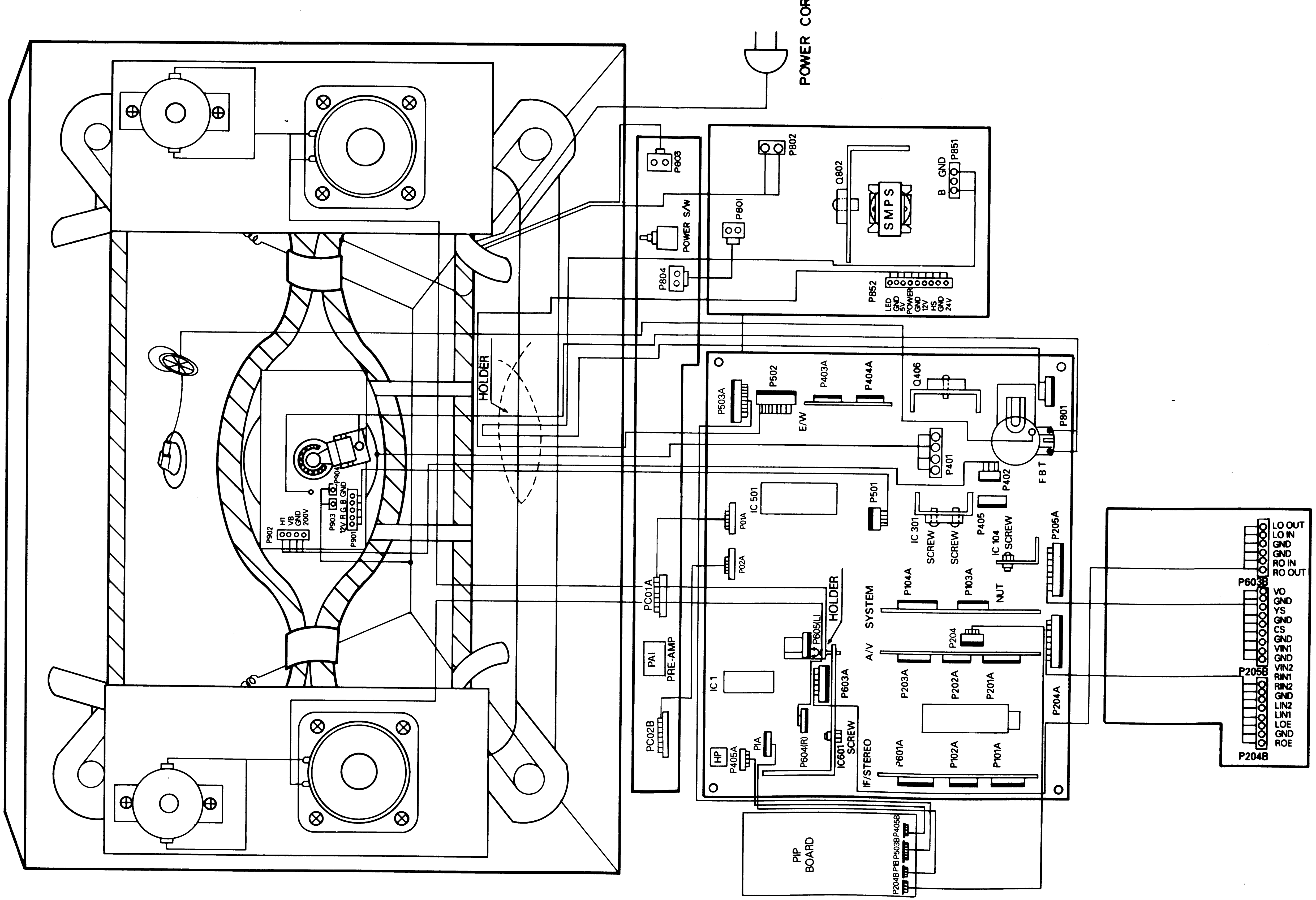

Connect an oscilloscope to pin 3 of IC1.
Press the VOL. UP key.
The waveform below is observed.
+5V
0V
NO
OK
RMT/PRE-AMP is OK
Check/Replace RMT, PRE-AMP

(CHART 4)

(1) On Screen Display Operation Check


Check the pins 63 and 62 of IC01. H.blanking pulse (FBT) and V. blanking (VB) pulse are observed.
NO
OK
Check Q10 and Q11.
Check pin 1 of IC01. Is it oscillating?
NO
OK
Check L1. If they are correct, replace IC01.
Adjust L1 until the characters appear. If not, check the video out circuit.

WIRING DIAGRAM


POWER CORD
P803
POWER S/W
P804
P802
P801
Q802
SMPS
B GND
P851
P852
LED
GND
5V
POWER
GND
12V
HS
GND
24V
HOLDER
P902
H1
VB
GND
200V
P903
P904
P901
12V R G B GND
P503A
P502
E/W
P403A
P404A
Q406
P801
P401
P402
FBT
IC 501
P01A
P02A
P501
IC 301
SCREW
SCREW
P405
IC 104
SCREW
P205A
P104A
P103A
NUT
SYSTEM
A/V
P204
P203A
P202A
P201A
P204A
HOLDER
P605(L)
P603A
IC 1
P604(R)
IC601
SCREW
IF/STEREO
P601A
P102A
P101A
HP
P405A
P1A
PC01A
PA1
PRE-AMP
PC02B
PIP BOARD
P204B
P1B
P503B
P405B
LO OUT
LO IN
GND
GND
RO IN
RO OUT
P603B
VO
GND
YS
GND
CS
GND
VIN1
GND
VIN2
P205B
RIN1
RIN2
GND
LIN2
LIN1
LOE
GND
ROE
P204B

REPLACEMENT PARTS LIST

SAFETY PARTS LIST OF MC-15A CHASSIS ⚠

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed without being noticed by a visual inspection and the X-RAY RADIATION protection afforded by some of them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified by ⚠ marks on the circuit diagram. Before replacing any these components, read the specification of the part carefully. The use of substitute replacement parts which do not have the same characteristics as specified in this parts list may create X-RAY RADIATION.

LOCA. NO	DESCRIPTION
C423	CAPACITOR
C801	CAPACITOR
C802	CAPACITOR
C821	CAPACITOR
C827	CAPACITOR
C870	CAPACITOR
D402	DIODE
D403	DIODE
F801	FUSE
FR401	RESISTOR, FIX METAL FILM OXIDE
FR402	RESISTOR, FUSIBLE
FR403	RESISTOR, FUSIBLE
FR404	RESISTOR, FUSIBLE
FR405	RESISTOR, FIX METAL FILM OXIDE
FR406	RESISTOR, FUSIBLE
FR407	RESISTOR, FUSIBLE
FR408	RESISTOR, FUSIBLE
FR853	RESISTOR, FIX METAL FILM OXIDE
FR854	RESISTOR, FUSIBLE
L801	COIL
L802	COIL
R823	RESISTOR
R830	RESISTOR
RL802	RELAY
SW801	SWITCH
T401	FBT
T801	TRANSFORMER
T802	TRANSFORMER
	POWER SWITCH
	COLOR PICTURE TUBE (CPT)
	COIL, DEGAUSSING
	DEFLECTION YOKE (DY)

The parts which is marked with "R" in the "AL" column [illegible] remote control unit.

「REPLACEMENT PARTS LIST」 PAGE : 1

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
	R		0IGS838902A	IC, GOLDSTAR ELECTRON	GS8389-02A(GMS30120A-MD07)24S	
			1PTF0402816	SCREW,TRUSS HEAD TAP TITE +	D4 L12 MSWR3/BK	
			1PTF0403016	SCREW,TRUSS HEAD TAP TITE +	"P" TYPE D4 L14 MSWR3/BK	
			1PTF0403016	SCREW,TRUSS HEAD TAP TITE +	"P" TYPE D4 L14 MSWR3/BK	
			105-214G	TRANSMITTER	MC-15A,GS,W/PIP,UNIFIED	
			110-S75G	PCB ASSY	A/V JACK(S-VHS,29C20P)	
			110-V74E	PCB ASSY	IF/STEREO(PIP)	
			110-V75C	PCB ASSY	SYSTEM(MULTI PIP)	
			110-V76B	PCB ASSY	A/V (W/COMB) PIP	
			110-V77D	PCB ASSY	E/W(PINCUSHION) M-INSERT	
			110-V93G	PCB ASSY	SMPS,29",STANDARD,4605,M-IN	
			110-Y14A	PCB ASSY	CPT MC-15A(AUTO ADJ)	
			110-Y88A	PCB ASSY	MAIN 29C10P FULL M-IN RCA	
			110-Z26G	PCB ASSY	CONTROL CF-29C20,STANDARD M-IN	
			112-C29B	CPT	A68AGA20X01(RCA)	
			120-C76D	SPEAKER	TWEETER(40HM)	
			120-C77D	SPEAKER	SQUAKWER(40HM)	
			120-D23C	SPEAKER	29C20(40HM TWEETER+SQUAWKER)	
			120-D23D	SPEAKER	29C20(4 OHM TWEETER+SQUAWK)	
			150-822G	COIL	DEGAUSSING 29"	
			170-797R	LEAD SET	CPT EARTH (INCH 29,CNR-2990AI)	NSP
			174-179C	CORD	POWER W/FILTER(SANG NONG)	
			174-199W	CORD	ASSY,POWER(179C,L=300,242F)	
			300-A90Y	CABINET ASSY	CF-29C20P(G/S,MC15A,PIP)	
			303-H73A	COVER	BATTERY (105-212)	
			303-J49A	COVER	ASSY,BACK(MC15A,412-759A,GS)	
			305-002D	HOUSING	2P AMP 171157-1 (10)	
			309-A77U	CHASSIS ASSY	MAIN 15A CF-29C20P STANDARD	
			309-974H	CHASSIS ASSY	PIP CF-29C10P RCA	
			312-395A	FRAME	MAIN CHASSIS(29C20,MC15A)	
			313-244A	PANEL	CONTROL (CB-29C20)	
			313-253C	PANEL	ASSY CONT.(CF-29C20,7091,MC15)	
			314-289B	GRILL	SPEAKER(R/L) (CB-29C20X)	
			315-575C	DOOR	CONTRL (CF-29C20,7091,MC15A)	
			316-403A	WINDOW	PRE-AMP (CB-29C20)	
			320-062F	SPRING	KNOB	
			332-229G	SCREW	HEXAGON HEAD(L:40,D:22)	
			341-184D	HOLDER	LEAD TWISTER	
			341-242F	HOLDER	POWER CORD	
			341-470D	HOLDER	LEAD WIRE L=150	
			341-574A	HOLDER	ANODE LEAD	
			341-685A	HOLDER	D-COIL SPRING TYPE	
			343-A36A	SUPPORTER	25"FBT(NC17A)	
			343-A63A	SUPPORTER	EWB MC-15A	
			343-A77A	SUPPORTER	SYS/IF/AV(MC15A)	
			343-A85A	SUPPORTER	PIP BOARD(25C10,29C10)	
			372-P37E	BOX	INNER CF-29C20P DPGRR	
			374-D67U	WRAP ASSY	ASSY	
			381-094D	SOCKET	CPT PCS-627(HIGH FOCUS)	
			381-197A	SOCKET	ADAPTER	

「REPLACEMENT PARTS LIST」 PAGE : 2

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
			387-651A	CONNECTOR ASSY	DY(NC-96A)	
			387-839J	CONNECTOR	ASSY,3P (IL-G)	
			401-713E	BOARD	ASSY A/V ANT(CF-29C20P) PIP	
			407-M31A	PLATE	ANT.BOARD (CFT-2590)	
			407-M32B	PLATE	CONT.DECORATION	
			407-R38B	PLATE	CONTROL DECO(CF-29C20,MC15A)	
			410-585A	MARK	BRAND GS(FORGING,25"-29")	
			413-B67E	LABEL,ID	GS-E,EUROPE/CIS(230V,ROK)	
			441-330A	BUTTON	POWER (CB-29C20)	
			441-372A	BUTTON	POWER(CP-29C20)	
			470-861A	LOCK	ASSY,DOOR KIFCO	
			482-G78Z	INSTRUCTIONS(OWNER'S MANUAL)	MC15A,GS,RS/E,214G TX	
		AR50	0RD1500F609	R,CARBON FILM	150 1/6W 5	
		AR51	0RD1500F609	R,CARBON FILM	150 1/6W 5	
		BD801	0DD560000AA	DIODE	D5SB60 BRIDGE (5A/600V)S.D.G	
		CB200	166-272A	FILTER	COMB (UGL-316KNT,SHOWA)	
		C1	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C10	0CN2210K519	C,TUBULA(HIGH DIELE)	220PF 50V K	
		C101	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C102	0CE2256K618	C,ELECTROLYTIC	2.2MF SMS 50V M	
		C103	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C104	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C105	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C106	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C107	0CN3310K519	C,TUBULA(HIGH DIELE)	330P 50V K	
		C108	0CN1040K949	C,TUBULA(HIGH DIELE)	0.1M 50V Z	
		C109	0CN1040K949	C,TUBULA(HIGH DIELE)	0.1M 50V Z	
		C110	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C111	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C112	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C115	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C116	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C117	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C118	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C119	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C12	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C120	0CE2246K618	C,ELECTROLYTIC	0.22M SMS 50V M	
		C121	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C122	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C123	0CQ1531N509	C,POLYESTER(MYLAR)	0.015MF 100V K	
		C124	0CX5100K409	C,TUBULA(T.C)	51P 50V J	
		C125	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C126	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C127	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C128	181-064T	C,ELECTROLYTIC	0.47MF 50V TR	
		C129	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C13	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C130	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C131	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C132	0CX2000K419	CAPACITOR TUBULA(T.C)	20P 50V J C TA52	

「REPLACEMENT PARTS LIST」 PAGE : 3

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C133	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C14	0CN2210K519	C,TUBULA(HIGH DIELE)	220PF 50V K	
		C15	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C151	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C152	0CX2200K409	C,TUBULA(T.C)	22PF 50V J	
		C153	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C154	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C155	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C156	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C157	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C158	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C159	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C16	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C160	0CN4710K519	C,TUBULA(HIGH DIELE)	470PF 50V K	
		C161	0CN4710K519	C,TUBULA(HIGH DIELE)	470PF 50V K	
		C162	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C163	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C164	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C165	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C166	0CN8200K519	CAPACITOR TUBULA(HIGH DIELE)	82P 50V K B TA52	
		C17	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C18	0CE1066K618	C,ELECTROLYTIC	10MF SMS 50V M	
		C19	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C2	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C20	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C200	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C201	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C202	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C203	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C204	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C205	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C206	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C209	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C210	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C211	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C213	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C214	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C215	0CE1046K618	C,ELECTROLYTIC	0.1U SMS 50V M	
		C216	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C218	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C219	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C220	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C221	0CX6200K409	C,TUBULA(T.C)	62PF 50V J	
		C222	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C223	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C230	0CN6810K519	C,TUBULA(HIGH DIELE)	680P 50V K	
		C3	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C301	181-444S	C,MPE	ECQ-V 0.1MF 50V J	
		C302	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C303	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	

REPLACEMENT PARTS LIST

SAFETY PARTS LIST OF MC-15A CHASSIS ⚠

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed without being noticed by a visual inspection and the X-RAY RADIATION protection afforded by some of them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified by ⚠ marks on the circuit diagram. Before replacing any these components, read the specification of the part carefully. The use of substitute replacement parts which do not have the same characteristics as specified in this parts list may create X-RAY RADIATION.

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FR402	RESISTOR, FUSIBLE
FR403	RESISTOR, FUSIBLE
FR404	RESISTOR, FUSIBLE
FR405	RESISTOR, FIX METAL FILM OXIDE
FR406	RESISTOR, FUSIBLE
FR407	RESISTOR, FUSIBLE
FR408	RESISTOR, FUSIBLE
FR853	RESISTOR, FIX METAL FILM OXIDE
FR854	RESISTOR, FUSIBLE
L801	COIL
L802	COIL
R823	RESISTOR
R830	RESISTOR
RL802	RELAY
SW801	SWITCH
T401	FBT
T801	TRANSFORMER
T802	TRANSFORMER
	POWER SWITCH
	COLOR PICTURE TUBE (CPT)
	COIL, DEGAUSSING
	DEFLECTION YOKE (DY)

The parts which is marked with "R" in the "AL" column of [illegible] remote control unit.

⌜REPLACEMENT PARTS LIST⌟ P A G E : 1

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
	R		0IGS838902A	IC, GOLDSTAR ELECTRON	GS8389-02A(GMS30120A-MD07)24S	
			1PTF0402816	SCREW,TRUSS HEAD TAP TITE +	D4 L12 MSWR3/BK	
			1PTF0403016	SCREW,TRUSS HEAD TAP TITE +	"P" TYPE D4 L14 MSWR3/BK	
			1PTF0403016	SCREW,TRUSS HEAD TAP TITE +	"P" TYPE D4 L14 MSWR3/BK	
			105-214G	TRANSMITTER	MC-15A,GS,W/PIP,UNIFIED	
			110-S75G	PCB ASSY	A/V JACK(S-VHS,29C20P)	
			110-V74E	PCB ASSY	IF/STEREO(PIP)	
			110-V75C	PCB ASSY	SYSTEM(MULTI PIP)	
			110-V76B	PCB ASSY	A/V (W/COMB) PIP	
			110-V77D	PCB ASSY	E/W(PINCUSHION) M-INSERT	
			110-V93G	PCB ASSY	SMPS,29",STANDARD,4605,M-IN	
			110-Y14A	PCB ASSY	CPT MC-15A(AUTO ADJ)	
			110-Y88A	PCB ASSY	MAIN 29C10P FULL M-IN RCA	
			110-Z26G	PCB ASSY	CONTROL CF-29C20,STANDARD M-IN	
			112-C29B	CPT	A68AGA20X01(RCA)	
			120-C76D	SPEAKER	TWEETER(4OHM)	
			120-C77D	SPEAKER	SQUAKWER(4OHM)	
			120-D23C	SPEAKER	29C20(4OHM TWEETER+SQUAWKER)	
			120-D23D	SPEAKER	29C20(4 OHM TWEETER+SQUAWK)	
			150-822G	COIL	DEGAUSSING 29"	
			170-797R	LEAD SET	CPT EARTH (INCH 29,CNR-2990AI)	NSP
			174-179C	CORD	POWER W/FILTER(SANG NONG)	
			174-199W	CORD	ASSY,POWER(179C,L=300,242F)	
			300-A90Y	CABINET ASSY	CF-29C20P(G/S,MC15A,PIP)	
			303-H73A	COVER	BATTERY (105-212)	
			303-J49A	COVER	ASSY,BACK(MC15A,412-759A,GS)	
			305-002D	HOUSING	2P AMP 171157-1 (10)	
			309-A77U	CHASSIS ASSY	MAIN 15A CF-29C20P STANDARD	
			309-974H	CHASSIS ASSY	PIP CF-29C10P RCA	
			312-395A	FRAME	MAIN CHASSIS(29C20,MC15A)	
			313-244A	PANEL	CONTROL (CB-29C20)	
			313-253C	PANEL	ASSY CONT.(CF-29C20,7091,MC15)	
			314-289B	GRILL	SPEAKER(R/L) (CB-29C20X)	
			315-575C	DOOR	CONTRL (CF-29C20,7091,MC15A)	
			316-403A	WINDOW	PRE-AMP (CB-29C20)	
			320-062F	SPRING	KNOB	
			332-229G	SCREW	HEXAGON HEAD(L:40,D:22)	
			341-184D	HOLDER	LEAD TWISTER	
			341-242F	HOLDER	POWER CORD	
			341-470D	HOLDER	LEAD WIRE L=150	
			341-574A	HOLDER	ANODE LEAD	
			341-685A	HOLDER	D-COIL SPRING TYPE	
			343-A36A	SUPPORTER	25"FBT(NC17A)	
			343-A63A	SUPPORTER	EWB MC-15A	
			343-A77A	SUPPORTER	SYS/IF/AV(MC15A)	
			343-A85A	SUPPORTER	PIP BOARD(25C10,29C10)	
			372-P37E	BOX	INNER CF-29C20P DPGRR	
			374-D67U	WRAP ASSY	ASSY	
			381-094D	SOCKET	CPT PCS-627(HIGH FOCUS)	
			381-197A	SOCKET	ADAPTER	

⌜REPLACEMENT PARTS LIST⌟ P A G E : 2

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
			387-651A	CONNECTOR ASSY	DY(NC-96A)	
			387-839J	CONNECTOR	ASSY,3P (IL-G)	
			401-713E	BOARD	ASSY A/V ANT(CF-29C20P) PIP	
			407-M31A	PLATE	ANT.BOARD (CFT-2590)	
			407-M32B	PLATE	CONT.DECORATION	
			407-R38B	PLATE	CONTROL DECO(CF-29C20,MC15A)	
			410-585A	MARK	BRAND GS(FORGING,25"-29")	
			413-B67E	LABEL,ID	GS-E,EUROPE/CIS(230V,ROK)	
			441-330A	BUTTON	POWER (CB-29C20)	
			441-372A	BUTTON	POWER(CP-29C20)	
			470-861A	LOCK	ASSY,DOOR KIFCO	
			482-G78Z	INSTRUCTIONS(OWNER'S MANUAL)	MC15A,GS,RS/E,214G TX	
		AR50	0RD1500F609	R,CARBON FILM	150 1/6W 5	
		AR51	0RD1500F609	R,CARBON FILM	150 1/6W 5	
		BD801	0DD560000AA	DIODE	D5SB60 BRIDGE (5A/600V)S.D.G	
		CB200	166-272A	FILTER	COMB (UGL-316KNT,SHOWA)	
		C1	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C10	0CN2210K519	C,TUBULA(HIGH DIELE)	220PF 50V K	
		C101	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C102	0CE2256K618	C,ELECTROLYTIC	2.2MF SMS 50V M	
		C103	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C104	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C105	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C106	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C107	0CN3310K519	C,TUBULA(HIGH DIELE)	330P 50V K	
		C108	0CN1040K949	C,TUBULA(HIGH DIELE)	0.1M 50V Z	
		C109	0CN1040K949	C,TUBULA(HIGH DIELE)	0.1M 50V Z	
		C110	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C111	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C112	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C115	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C116	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C117	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C118	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C119	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C12	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C120	0CE2246K618	C,ELECTROLYTIC	0.22M SMS 50V M	
		C121	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C122	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C123	0CQ1531N509	C,POLYESTER(MYLAR)	0.015MF 100V K	
		C124	0CX5100K409	C,TUBULA(T.C)	51P 50V J	
		C125	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C126	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C127	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C128	181-064T	C,ELECTROLYTIC	0.47MF 50V TR	
		C129	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C13	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C130	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C131	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C132	0CX2000K419	CAPACITOR TUBULA(T.C)	20P 50V J C TA52	

⌜REPLACEMENT PARTS LIST⌟ P A G E : 3

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C133	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C14	0CN2210K519	C,TUBULA(HIGH DIELE)	220PF 50V K	
		C15	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C151	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C152	0CX2200K409	C,TUBULA(T.C)	22PF 50V J	
		C153	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C154	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C155	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C156	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C157	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C158	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C159	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C16	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C160	0CN4710K519	C,TUBULA(HIGH DIELE)	470PF 50V K	
		C161	0CN4710K519	C,TUBULA(HIGH DIELE)	470PF 50V K	
		C162	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C163	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C164	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C165	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C166	0CN8200K519	CAPACITOR TUBULA(HIGH DIELE)	82P 50V K B TA52	
		C17	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C18	0CE1066K618	C,ELECTROLYTIC	10MF SMS 50V M	
		C19	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C2	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C20	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C200	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C201	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C202	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C203	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C204	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C205	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C206	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C209	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C210	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C211	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C213	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C214	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C215	0CE1046K618	C,ELECTROLYTIC	0.1U SMS 50V M	
		C216	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C218	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C219	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C220	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C221	0CX6200K409	C,TUBULA(T.C)	62PF 50V J	
		C222	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C223	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C230	0CN6810K519	C,TUBULA(HIGH DIELE)	680P 50V K	
		C3	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		C301	181-444S	C,MPE	ECQ-V 0.1MF 50V J	
		C302	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C303	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	

「REPLACEMENT PARTS LIST」 PAGE : 4

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C304	0CQ1021N509	C.POLYESTER(MYLAR)	0.001U 100V K	
		C305	0CE2276J618	C.ELECTROLYTIC	220M SMS 35V M	
		C306	0CN3310K519	C.TUBULA(HIGH DIELE)	330P 50V K	
		C307	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C308	0CE4756K618	C.ELECTROLYTIC	4.7MF SMS 50V M	
		C309	0CE1086J618	C.ELECTROLYTIC	1000M SMS 35V M	
		C310	181-0321	CAPACITOR.TANTAL	1.0MF 25V K TAPING	
		C311	181-0321	CAPACITOR.TANTAL	1.0MF 25V K TAPING	
		C312	0CE2286H61A	C.ELECTROLYTIC	2200M SMS 25V M	
		C313	0CQ2241N501	CAPACITOR POLYESTER(MYLAR)	0.22MF 100V L POLY TP	
		C317	0CK3320W515	CAPACITOR CERAMIC(HIGH DIELE)	3300P 500V K B TS	
		C4	0CE2256K618	C.ELECTROLYTIC	2.2MF SMS 50V M	
		C401	0CN1020K519	C.TUBULA(HIGH DIELE)	1000PF 50V K	
		C403	0CN5610K519	C.TUBULA(HIGH DIELE)	560P 50V K	
		C404	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C405	0CE1066F618	C.ELECTROLYTIC	10MF SMS 16V M	
		C406	0CQ1531N519	CAPACITOR POLYESTER(MYLAR)	0.015MF 100V K POLY NI TP	
		C407	0CQ2731N509	C.POLYESTER(MYLAR)	0.027U 100V K	
		C408	181-057Z	CAPACITOR.POLYESTER	0.03MF 100V J	
		C409	0CC3010K405	CAPACITOR CERAMIC(TEMP.COMP)	300P 50V J SL TS	
		C409	0CC3010K405	CAPACITOR CERAMIC(TEMP.COMP)	300P 50V J SL TS	
		C410	0CE1056K618	C.ELECTROLYTIC	1.0MF SMS 50V M	
		C411	0CN1020K519	C.TUBULA(HIGH DIELE)	1000PF 50V K	
		C415	0CN3910K519	C.TUBULA(HIGH DIELE)	390P 50V K	
		C416	0CK3310W515	C.CERAMIC(HIGH DIELE)	330P 500V K	
		C418	0CE3366P618	C.ELECTROLYTIC	33U SMS 160V M	
		C421	181-131F	C.METAL POLYPROPYLENE	7300PF J	
		C422	181-131B	C.METALPOLYPROPYLENE	8200PF 1.6KV J	
		C423	181-060F	CAPACITOR	ERQ-2CT 1R1	
		C424	181-128D	C.METAL POLYPROPYLENE	0.5MF J	
		C425	0CE1051P618	C.ELECTROLYTIC	1MF SMS 160V M	
		C426	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		C427	0CQ6821N519	CAPACITOR POLYESTER(MYLAR)	0.0068U 100V K POLY NI TP	
		C428	0CK4710W515	C.CERAMIC(HIGH DIELE)	470PF 500V K	
		C429	0CE1076F618	C.ELECTROLYTIC	100MF SMS 16V M	
		C430	0CE4766H618	C.ELECTROLYTIC	47M SMS 25V M	
		C431	0CE4776H618	C.ELECTROLYTIC	470U SMS 25V M	
		C432	0CK2710W515	C.CERAMIC(HIGH DIELE)	270P 500V K	
		C433	0CK47101515	C.CERAMIC(HIGH DIELE)	470P 1KV K	
		C434	0CE4776K618	CAPACITOR.ELECTROLYTIC	470M SMS 50V M TP5	
		C435	0CE1066N618	C.ELECTROLYTIC	10MF SMS 100V M	
		C436	0CK1220W515	C.CERAMIC(HIGH DIELE)	1200P 500V K	
		C437	0CK47101515	C.CERAMIC(HIGH DIELE)	470P 1KV K	
		C438	0CK10201515	CAPACITOR.CERAMIC(HIGH DIELE)	1000P 1KV K B TS	
		C439	0CE2261R618	C.ELECTROLYTIC	22M SM 250V M	
		C440	181-059D	C.POLYPROPYLENE	0.047MF 200V K	
		C441	0CQ1031N509	C.POLYESTER(MYLAR)	0.01U 100V K	
		C442	181-064S	C.ELECTROLYTIC	3.3MF 16V TR	
		C445	181-020A	C.ELECTROLYTIC	6.8MF 25V M	
		C446	0CE4756K618	C.ELECTROLYTIC	4.7MF SMS 50V M	

「REPLACEMENT PARTS LIST」 PAGE : 5

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C450	0CK22201510	C.CERAMIC(HIGH DIELE)	2200P 1KV K	
		C451	0CE4766K618	C.ELECTROLYTIC	47M SMS 50V M	
		C452	0CE2276J618	C.ELECTROLYTIC	220M SMS 35V M	
		C453	0CE4776F618	C.ELECTROLYTIC	470MF SMS 16V M	
		C454	181-444E	C.METALPOLYESTER	0.1MF 50V J	
		C455	181-444E	C.METALPOLYESTER	0.1MF 50V J	
		C456	181-444E	C.METALPOLYESTER	0.1MF 50V J	
		C458	181-444G	C.METALPOLYESTER	0.15MF 50V (TR)	
		C5	0CE2276F618	C.ELECTROLYTIC	220MF SMS 16V M	
		C500	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		C501	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		C502	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		C503	0CX8R20K519	CAPACITOR TUBULA(T.C)	8.2P 50V K C TA52	
		C504	0CE1076F618	C.ELECTROLYTIC	100MF SMS 16V M	
		C505	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C506	0CE1066F618	C.ELECTROLYTIC	10MF SMS 16V M	
		C507	0CX8R20K519	CAPACITOR TUBULA(T.C)	8.2P 50V K C TA52	
		C508	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C509	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C510	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C511	181-064T	C.ELECTROLYTIC	0.47MF 50V TR	
		C512	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C513	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C514	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C515	0CX2700K409	C.TUBULA(T.C)	27PF 50V J	
		C516	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C517	0CQ2231N519	CAPACITOR POLYESTER(MYLAR)	0.022MF 100V K POLY TP	
		C518	0CQ1041N509	C.POLYESTER(MYLAR)	0.1MF 100V L	
		C519	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C520	0CE2256K618	C.ELECTROLYTIC	2.2MF SMS 50V M	
		C521	0CQ1031N509	C.POLYESTER(MYLAR)	0.01U 100V K	
		C522	0CX2700K409	C.TUBULA(T.C)	27PF 50V J	
		C523	0CX3900K409	C.TUBULA(T.C)	39PF 50V J	
		C525	181-057Z	CAPACITOR.POLYESTER	0.03MF 100V J	
		C526	0CX3000K409	C.TUBULA(T.C)	30P 50V J	
		C528	0CX1500K419	C.TUBULA(T.C)	15P 50V J	
		C529	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		C530	0CQ1041N509	C.POLYESTER(MYLAR)	0.1MF 100V L	
		C531	0CE2276F618	C.ELECTROLYTIC	220MF SMS 16V M	
		C532	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C533	0CQ1041N509	C.POLYESTER(MYLAR)	0.1MF 100V L	
		C534	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C535	0CE2266K618	C.ELECTROLYTIC	22M SMS 50V M	
		C536	0CE1066K618	C.ELECTROLYTIC	10MF SMS 50V M	
		C537	0CE4746K618	C.ELECTROLYTIC	0.47MF SMS 50V M	
		C538	0CN1020K519	C.TUBULA(HIGH DIELE)	1000PF 50V K	
		C539	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C540	0CE1056K618	C.ELECTROLYTIC	1.0MF SMS 50V M	
		C541	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	
		C542	0CN1030F679	C.TUBULA(HIGH DIELE)	0.01MF 16V M	

｢REPLACEMENT PARTS LIST｣ PAGE : 6

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C543	0CE1066K618	C,ELECTROLYTIC	10MF SMS 50V M	
		C544	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C545	181-032Z	C,TANTAL	0.22MF 35V K	
		C546	181-032Z	C,TANTAL	0.22MF 35V K	
		C547	181-032Z	C,TANTAL	0.22MF 35V K	
		C548	0CN8200K519	CAPACITOR TUBULA(HIGH DIELE)	82P 50V K B TA52	
		C549	0CN8200K519	CAPACITOR TUBULA(HIGH DIELE)	82P 50V K B TA52	
		C550	0CN8200K519	CAPACITOR TUBULA(HIGH DIELE)	82P 50V K B TA52	
		C551	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C552	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C553	0CX2200K409	C,TUBULA(T.C)	22PF 50V J	
		C554	0CX2200K409	C,TUBULA(T.C)	22PF 50V J	
		C555	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		C556	0CX2000K419	CAPACITOR TUBULA(T.C)	20P 50V J C TA52	
		C599	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C6	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		C60	0CX6200K409	C,TUBULA(T.C)	62PF 50V J	
		C601	0CE1086F618	C,ELECTROLYTIC	1000M SMS 16V M	
		C602	0CE1086F618	C,ELECTROLYTIC	1000M SMS 16V M	
		C603	181-444G	C,METALPOLYESTER	0.15MF 50V (TR)	
		C605	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		C606	0CE1086J618	C,ELECTROLYTIC	1000M SMS 35V M	
		C607	0CE2256K618	C,ELECTROLYTIC	2.2MF SMS 50V M	
		C608	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C609	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C61	0CX6200K409	C,TUBULA(T.C)	62PF 50V J	
		C610	0CE2256K618	C,ELECTROLYTIC	2.2MF SMS 50V M	
		C611	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C62	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C620	181-444G	C,METALPOLYESTER	0.15MF 50V (TR)	
		C650	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C651	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C652	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C653	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		C654	0CQ1041N509	C,POLYESTER(MYLAR)	0.1MF 100V L	
		C655	0CQ3331N509	C,POLYESTER(MYLAR)	0.033U 100V K	
		C656	0CQ6821N519	CAPACITOR POLYESTER(MYLAR)	0.0068U 100V K POLY NI TP	
		C657	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C658	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C659	0CQ1531N509	C,POLYESTER(MYLAR)	0.015MF 100V K	
		C660	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C661	0CQ1531N509	C,POLYESTER(MYLAR)	0.015MF 100V K	
		C662	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C663	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C664	0CQ3331N509	C,POLYESTER(MYLAR)	0.033U 100V K	
		C665	0CQ6821N519	CAPACITOR POLYESTER(MYLAR)	0.0068U 100V K POLY NI TP	
		C666	0CE4756K618	C,ELECTROLYTIC	4.7MF SMS 50V M	
		C7	0CN2210K519	C,TUBULA(HIGH DIELE)	220PF 50V K	
		C8	0CN1010K519	C,TUBULA(HIGH DIELE)	100PF 50V K	
		C801	181-408B	CAPACITOR	0.15UF(ISKRA1531)	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C802	181-408B	CAPACITOR	0.15UF(ISKRA1531)	
		C803	181-192A	CAPACITOR	KNB1531 0.1MF/250V(ISKRA)	
		C804	0CK10201515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 1KV K B TS	
		C805	0CK10201515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 1KV K B TS	
		C806	0CK10201515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 1KV K B TS	
		C807	0CK10201515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 1KV K B TS	
		C808	181-124B	C,ELECTROLYTIC	200MF 400V	
		C809	181-124B	C,ELECTROLYTIC	200MF 400V	
		C810	0CE1076H618	C,ELECTROLYTIC	100M SMS 25V M	
		C811	181-444J	C,METALPOLYESTER	0.22MF 50V J	
		C813	0CQ6821N519	CAPACITOR POLYESTER(MYLAR)	0.0068U 100V K POLY NI TP	
		C814	0CQ1031N519	CAPACITOR POLYESTER(MYLAR)	0.01U 100V K POLY NI TP	
		C815	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		C817	181-143D	C,POLYPROPYLENE	0.047MF 800V J	
		C818	181-221H	CAPACITOR,ELECTROLYTIC	1000MF 35V	
		C819	0CC47111545	C,CERAMIC(TEMP COMP)	470PF 105C 1KV K	
		C820	0CE1086F618	C,ELECTROLYTIC	1000M SMS 16V M	
		C821	0CC47111545	C,CERAMIC(TEMP COMP)	470PF 105C 1KV K	
		C823	0CC10112400	CAPACITOR,CERAMIC(TEMP COMP)	100PF 105C 2KV J SL R	
		C824	0CE4761R650	CAPACITOR,ELECTROLYTIC	47M SM 250V M FM7.5	
		C825	0CE1071Q650	CAPACITOR,ELECTROLYTIC	100M SM 200V M FM7.5	
		C826	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C827	181-064R	C,ELECTROLYTIC	1MF 50V M	
		C828	181-410B	CAPACITOR DE	4700PF M	
		C829	181-410B	CAPACITOR DE	4700PF M	
		C830	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C831	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		C832	0CE1086H618	C,ELECTROLYTIC	1000U SMS 25V M	
		C833	0CE4761R650	CAPACITOR,ELECTROLYTIC	47M SM 250V M FM7.5	
		C834	0CQ4731N509	C,POLYESTER(MYLAR)	0.047U 100V K	
		C835	181-083N	C,POLYPROPYLENE	0.001MF 1600V J	
		C838	0CE2276F618	C,ELECTROLYTIC	220MF SMS 16V M	
		C839	0CQ1031N519	CAPACITOR POLYESTER(MYLAR)	0.01U 100V K POLY NI TP	
		C840	0CC27111405	CAPACITOR,CERAMIC(TEMP COMP)	270PF 105C 1KV J SL TR	
		C841	181-444E	C,METALPOLYESTER	0.1MF 50V J	
		C845	0CQ4731N509	C,POLYESTER(MYLAR)	0.047U 100V K	
		C850	0CQ2221N509	C,POLYESTER(MYLAR)	0.0022U 100V K	
		C9	0CN1010K519	C,TUBULA(HIGH DIELE)	100PF 50V K	
		C901	0CK22202510	C,CERAMIC(HIGH DIELE)	2200PF 2KV K	
		C902	0CE1066H618	C,ELECTROLYTIC	10M SMS 25V M	
		C904	0CE1066K618	C,ELECTROLYTIC	10MF SMS 50V M	
		C911	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		C912	0CN1010K519	C,TUBULA(HIGH DIELE)	100PF 50V K	
		C913	0CN3910K519	C,TUBULA(HIGH DIELE)	390P 50V K	
		C921	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		C922	0CN1010K519	C,TUBULA(HIGH DIELE)	100PF 50V K	
		C923	0CN3910K519	C,TUBULA(HIGH DIELE)	390P 50V K	
		C931	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		C932	0CN1010K519	C,TUBULA(HIGH DIELE)	100PF 50V K	
		C933	0CN3910K519	C,TUBULA(HIGH DIELE)	390P 50V K	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		DL501	175-013B	DELAY LINE	MS-19P-53A (KINSEKI)	
		DL502	150-377C	COIL	DELAY 350NS W/O TRAP	
		D1	0DD414809ED	DIODE	DS4148	
		D108	0DD414809ED	DIODE	DS4148	
		D109	0DD414809ED	DIODE	DS4148	
		D11	0DD414809ED	DIODE	DS4148	
		D110	0DD859009AA	DIODE	SILICON MA859 TAPING	
		D112	0DD414809ED	DIODE	DS4148	
		D113	0DD859009AA	DIODE	SILICON MA859 TAPING	
		D12	0DD414809ED	DIODE	DS4148	
		D13	0DD414809ED	DIODE	DS4148	
		D151	0DD414809ED	DIODE	DS4148	
		D152	0DD414809ED	DIODE	DS4148	
		D153	0DD414809ED	DIODE	DS4148	
		D154	0DD414809ED	DIODE	DS4148	
		D155	0DD414809ED	DIODE	DS4148	
		D301	0DD150009CA	DIODE	RGP15J,TP(52MM),GI	
		D402	0DD400000AF	DIODE	RU4C	
		D403	0DD410000AC	DIODE	RU4DS,LF-L1 SANKEN	
		D404	0DD414809ED	DIODE	DS4148	
		D405	0DD414809ED	DIODE	DS4148	
		D406	0DD414809ED	DIODE	DS4148	
		D407	0DD200009AF	DIODE	RU-2MV,SANKEN	
		D408	0DD150009CA	DIODE	RGP15J,TP(52MM),GI	
		D409	0DD150009CA	DIODE	RGP15J,TP(52MM),GI	
		D410	0DD150009CA	DIODE	RGP15J,TP(52MM),GI	
		D411	0DD414809ED	DIODE	DS4148	
		D412	0DD414809ED	DIODE	DS4148	
		D451	0DD414809ED	DIODE	DS4148	
		D5	0DD414809ED	DIODE	DS4148	
		D500	0DD414809ED	DIODE	DS4148	
		D501	0DD414809ED	DIODE	DS4148	
		D503	0DD859009AA	DIODE	SILICON MA859 TAPING	
		D504	0DD859009AA	DIODE	SILICON MA859 TAPING	
		D505	0DD414809ED	DIODE	DS4148	
		D506	0DD414809ED	DIODE	DS4148	
		D605	0DD414809ED	DIODE	DS4148	
		D606	0DD414809ED	DIODE	DS4148	
		D8	0DD414809ED	DIODE	DS4148	
		D801	0DD414809ED	DIODE	DS4148	
		D802	0DD414809ED	DIODE	DS4148	
		D803	0DD150009CA	DIODE	RGP15J,TP(52MM),GI	
		D804	0DD120000BB	DIODE	FML-G12S	
		D805	0DD150009CA	DIODE	RGP15J,TP(52MM),GI	
		D806	0DD400000AF	DIODE	RU4C	
		D807	0DD414809ED	DIODE	DS4148	
		D808	0DD414809ED	DIODE	DS4148	
		D809	0DD150009CA	DIODE	RGP15J,TP(52MM),GI	
		D810	0DD150009CA	DIODE	RGP15J,TP(52MM),GI	
		D901	0DD414809ED	DIODE	DS4148	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		D902	0DD414809ED	DIODE	DS4148	
		D903	0DD414809ED	DIODE	DS4148	
		D911	0DD414809ED	DIODE	DS4148	
		D912	0DD414809ED	DIODE	DS4148	
		D921	0DD414809ED	DIODE	DS4148	
		D922	0DD414809ED	DIODE	DS4148	
		D931	0DD414809ED	DIODE	DS4148	
		D932	0DD414809ED	DIODE	DS4148	
		FR401	0RS1201J607	R,METAL FILM OXIDE	1.20K 1W 5%	
		FR402	0RF1000J607	R,FUSIBLE	100 1W 5%	
		FR403	0RF0201K607	R,FUSIBLE	2 2W 5%	
		FR404	0RF0470J607	R,FUSIBLE	0.47 1W 5%	
		FR405	0RS0470J607	R,METAL FILM OXIDE	0.47 1W 5%	
		FR406	0RF0101H609	R,FUSIBLE	1.0 1/2W 5	
		FR407	0RF0470H609	R,FUSIBLE	0.47 1/2W 5	
		FR451	0RF0102H609	R,FUSIBLE	10 1/2W 5	
		FR459	0RF0102J607	R,FUSIBLE	10 1W 5%	
		FR601	0RF0470J607	R,FUSIBLE	0.47 1W 5%	
		FR801	0RF0101H609	R,FUSIBLE	1.0 1/2W 5	
		FR802	0RF0470J607	R,FUSIBLE	0.47 1W 5%	
		F801	131-098B	FUSE	4A/250V HBC TIME DELAY 5X20	
		IC1	0IMI823401E	IC,MITSUBISHI	GS8234-01E(M37102M8-BA2SP) 64S	
		IC110	0ISA755500A	IC, SANYO	LA7555 PLL	
		IC151	0IT0861500A	IC, TOSHIBA	TA8615N	
		IC2	0IXI240200A	IC, XICOR	X2402(E-PROM)	
		IC200	0IT0872000A	IC,TOSHIBA	TA8720AN 30P S-TEM/CH+A/V	
		IC201	0IM0140530A	IC, MOTOROLA	MC14053 B	
		IC3	0ISE805200A	IC, SEIKO	S8052ALB	
		IC301	0ISA783300A	IC,SANYO	LA7833 7SIP V/OUT 2.2A(P-P)	
		IC401	0IKE781200A	IC,KEC	KIA7812P(KIA78012AP),KEC	
		IC501	0IT0865900A	IC, TOSHIBA	TA8659AN	
		IC601	0ISG200900A	IC, SGS-THOMSON	TDA2009A,11SIP,LIN SOUND AMP	
		IC650	0IPH842500A	IC, PHILIPS	TDA8425 SOUND CONTROL	
		IC801	0ISM460520A	IC,SIEMENS	TDA4605-2 8DIP SMPS CONTROLER	
		IC802	0IGS780500A	IC, GOLDSTAR ELECTRON	GL7805 REGULATOR	
		IC803	0ITF110100A	IC, TELEFUNKEN	TCDT1101G,6DIP,PHOTO COUPLER	
		J40	0RD0102F609	RESISTOR,FIXED CARBON FILM	10 1/6W 5 TA52	
		J819	0CN1040K949	C,TUBULA(HIGH DIELE)	0.1M 50V Z	
		LD1	0DL500000AA	DIODE LED	SLV-50(DL-ILR)	
		LD2	0DL500000AA	DIODE LED	SLV-50(DL-ILR)	
		LD3	0DL138000AA	DIODE,LED	KLRG138A,DUAL LED,KEC	
		L1	150-163N	COIL	OSD CONTROL(MC-15A)	
		L101	150-166G	COIL	CHOKE 10UH	
		L110	150-167A	COIL	CHOKE 0.55UH K	
		L112	150-167A	COIL	CHOKE 0.55UH K	
		L113	150-489W	COIL	6.0MHZ SIF	
		L114	0LA0391K119	INDUCTOR AXIAL LEAD	3.9UH K 2.3*3.4 TP	
		L115	150-489U	COIL	VCO/AFT 38.0MHZ	
		L116	0LA0122K119	INDUCTOR AXIAL LEAD	12UH K 2.3*3.4 TP	
		L117	150-489U	COIL	VCO/AFT 38.0MHZ	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		L118	150-164P	COIL	P-6.0MHZ TRAP	
		L119	150-164N	COIL	P-4.5MHZ TRAP	
		L151	150-489W	COIL	6.0MHZ SIF	
		L152	150-489V	COIL	5.5MHZ ID	
		L154	0LA0821K119	INDUCTOR AXIAL LEAD	8.2UH K 2.3*3.4 TP	
		L155	0LA0561K119	INDUCTOR AXIAL LEAD	5.6UH K 2.3*3.4 TP	
		L156	0LA0122K119	INDUCTOR AXIAL LEAD	12UH K 2.3*3.4 TP	
		L157	0LA0222K119	INDUCTOR AXIAL LEAD	22UH K 2.3*3.4 TP	
		L158	0LA0821K119	INDUCTOR AXIAL LEAD	8.2UH K 2.3*3.4 TP	
		L2	0LA0222K119	INDUCTOR AXIAL LEAD	22UH K 2.3*3.4 TP	
		L200	0LA0682K119	INDUCTOR AXIAL LEAD	68UH K 2.3*3.4 TP	
		L201	0LA0152K119	INDUCTOR AXIAL LEAD	15UH K 2.3*3.4 TP	
		L202	0LA0181K119	INDUCTOR AXIAL LEAD	1.8UH K 2.3*3.4 TP	
		L401	0LA0152K119	INDUCTOR AXIAL LEAD	15UH K 2.3*3.4 TP	
		L403	125-022K	CORE	FERRITE 1UH	
		L404	150-840A	COIL	H-LINEARITY(NC-01J)	
		L405	150-1091	COIL	PL 6800 UHJ	
		L407	150-166G	COIL	CHOKE 10UH	
		L451	150-717G	COIL	CHOKE 600MH	
		L500	150-216B	COIL	TRANS (CHROMA-DEMOD.)	
		L501	150-216B	COIL	TRANS (CHROMA-DEMOD.)	
		L502	0LA0681K119	INDUCTOR AXIAL LEAD	6.8UH K 2.3*3.4 TP	
		L503	150-489Z	COIL	BELL FILTER(MC92A)	
		L504	150-E10S	COIL	VAR,07S 1D 4.6MHZ	
		L506	0LA0822K119	INDUCTOR AXIAL LEAD	82UH K 2.3*3.4 TP	
		L507	0LA0152K119	INDUCTOR AXIAL LEAD	15UH K 2.3*3.4 TP	
		L508	0LA0222K119	INDUCTOR AXIAL LEAD	22UH K 2.3*3.4 TP	
		L509	0LA0272K119	INDUCTOR AXIAL LEAD	27UH K 2.3*3.4 TP	
		L512	150-489Y	COIL	DL PHASE	
		L650	0LA0102K119	INDUCTOR AXIAL LEAD	10UH K 2.3*3.4 TP	
		L801	150-897B	COIL	L/F 20MH 0.2OHM 3.5A(AC)	
		L802	150-897B	COIL	L/F 20MH 0.2OHM 3.5A(AC)	
		L803	150-235E	COIL	HOR.CHOKE 1MH(1A)	
		L804	125-123A	CORE	FERRITE BFD3565R2F	
		L805	125-123A	CORE	FERRITE BFD3565R2F	
		L806	125-123A	CORE	FERRITE BFD3565R2F	
		L807	125-123A	CORE	FERRITE BFD3565R2F	
		L808	125-123A	CORE	FERRITE BFD3565R2F	
		PA1	106-048A	PRE-AMP	SBX-1677-02(38.0KHZ)	
		PC1	0CX2000K409	C,TUBULA(T.C)	20P 50V J	
		PC10	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC100	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC101	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC102	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC105	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC106	0CX3900K409	C,TUBULA(T.C)	39PF 50V J	
		PC107	0CX1200K409	C,TUBULA(T.C)	12PF 50V J	
		PC108	0CX1200K409	C,TUBULA(T.C)	12PF 50V J	
		PC109	0CX1200K409	C,TUBULA(T.C)	12PF 50V J	
		PC11	181-074U	CAPACITOR	PSR 562G	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		PC110	0CN1010K519	C,TUBULA(HIGH DIELE)	100PF 50V K	
		PC111	0CN1010K519	C,TUBULA(HIGH DIELE)	100PF 50V K	
		PC112	0CN1010K519	C,TUBULA(HIGH DIELE)	100PF 50V K	
		PC12	181-444P	CAPACITOR	MPE.ECQ-V1H564JZ3(TR)	
		PC13	0CQ6821N509	C,POLYESTER(MYLAR)	0.0068U 100V K	
		PC14	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC15	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		PC16	0CQ2231N509	C,POLYESTER(MYLAR)	0.022MF 100V K	
		PC17	181-444E	C,METALPOLYESTER	0.1MF 50V J	
		PC18	0CQ1521N509	C,POLYESTER(MYLAR)	0.0015U 100V K	
		PC19	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC2	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		PC20	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC21	181-444E	C,METALPOLYESTER	0.1MF 50V J	
		PC22	0CX4700K409	C,TUBULA(T.C)	47PF 50V J	
		PC23	0CN1510K519	C,TUBULA(HIGH DIELE)	150P 50V K	
		PC24	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		PC25	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		PC26	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC27	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC28	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC29	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC3	0CX2000K409	C,TUBULA(T.C)	20P 50V J	
		PC30	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC31	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		PC33	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC34	0CE1086D618	C,ELECTROLYTIC	1000U SMS 10V M	
		PC36	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		PC37	181-444B	C,MPE.ECQ-V	0.056UF/50V J	
		PC38	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC39	0CQ4721N509	C,POLYESTER(MYLAR)	0.0047U 100V K	
		PC4	0CE1066F618	C,ELECTROLYTIC	10MF SMS 16V M	
		PC40	181-444E	C,METALPOLYESTER	0.1MF 50V J	
		PC41	181-444E	C,METALPOLYESTER	0.1MF 50V J	
		PC42	181-444E	C,METALPOLYESTER	0.1MF 50V J	
		PC43	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC44	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC45	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		PC46	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		PC47	0CE1056K618	C,ELECTROLYTIC	1.0MF SMS 50V M	
		PC48	0CE1086D618	C,ELECTROLYTIC	1000U SMS 10V M	
		PC49	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC5	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC50	0CN4710K519	C,TUBULA(HIGH DIELE)	470PF 50V K	
		PC51	0CN8210K519	C,TUBULA(HIGH DIELE)	820P 50V K	
		PC52	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		PC53	0CN4710K519	C,TUBULA(HIGH DIELE)	470PF 50V K	
		PC55	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC56	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC57	0CE1086F618	C,ELECTROLYTIC	1000M SMS 16V M	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		PC58	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC59	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC6	181-444J	C,METALPOLYESTER	0.22MF 50V J	
		PC60	0CE1086D618	C,ELECTROLYTIC	1000U SMS 10V M	
		PC61	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC62	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC64	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		PC66	0CE1086D618	C,ELECTROLYTIC	1000U SMS 10V M	
		PC67	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PC68	0CN2210K519	C,TUBULA(HIGH DIELE)	220PF 50V K	
		PC69	0CQ1031N509	C,POLYESTER(MYLAR)	0.01U 100V K	
		PC7	181-444J	C,METALPOLYESTER	0.22MF 50V J	
		PC70	181-444L	C,MPE ECQ-V	0.33U 50V J	
		PC71	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		PC72	0CQ4731N509	C,POLYESTER(MYLAR)	0.047U 100V K	
		PC73	181-444L	C,MPE ECQ-V	0.33U 50V J	
		PC74	181-444S	C,MPE	ECQ-V 0.1MF 50V J	
		PC75	0CQ2231N509	C,POLYESTER(MYLAR)	0.022MF 100V K	
		PC76	0CQ2231N509	C,POLYESTER(MYLAR)	0.022MF 100V K	
		PC77	0CQ1031N509	C,POLYESTER(MYLAR)	0.01U 100V K	
		PC78	0CE4766F618	C,ELECTROLYTIC	47MF SMS 16V M	
		PC79	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		PC8	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		PC80	0CX2700K409	C,TUBULA(T.C)	27PF 50V J	
		PC81	0CC1010K415	C,CERAMIC(TEMP COMP)	100P 50V J	
		PC82	0CX2700K409	C,TUBULA(T.C)	27PF 50V J	
		PC83	181-444E	C,METALPOLYESTER	0.1MF 50V J	
		PC84	181-444E	C,METALPOLYESTER	0.1MF 50V J	
		PC85	0CN1810K519	CAPACITOR TUBULA(HIGH DIELE)	180PF 50V K B TA52	
		PC86	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		PC87	0CN2210K519	C,TUBULA(HIGH DIELE)	220PF 50V K	
		PC88	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		PC89	181-444J	C,METALPOLYESTER	0.22MF 50V J	
		PC9	0CE4776F618	C,ELECTROLYTIC	470MF SMS 16V M	
		PC90	0CE2266F618	C,ELECTROLYTIC	22MF SMS 16V M	
		PC91	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		PC92	0CN1030F679	C,TUBULA(HIGH DIELE)	0.01MF 16V M	
		PC93	0CE2266F618	C,ELECTROLYTIC	22MF SMS 16V M	
		PC94	0CN1210K519	C,TUBULA(HIGH DIELE)	120P 50V K	
		PC95	0CN1020K519	C,TUBULA(HIGH DIELE)	1000PF 50V K	
		PC96	0CE1086D618	C,ELECTROLYTIC	1000U SMS 10V M	
		PC97	181-444H	C,MPE.ECQ-V	0.18UF/50V J	
		PC98	0CE1076F618	C,ELECTROLYTIC	100MF SMS 16V M	
		PC99	0CK1040K945	C,CERAMIC(HIGH DIELE)	0.1M 50V Z	
		PD1	0DD414809ED	DIODE	DS4148	
		PD2	0DD414809ED	DIODE	DS4148	
		PD3	0DD414809ED	DIODE	DS4148	
		PIC1	0ISG201400A	IC, SGS-THOMSON	TEA2014	
		PIC10	0IKE780500D	IC,KEC	KIA7805P(KIA78005AP),KEC	
		PIC11	0ISG511400A	IC, SGS-THOMSON	TEA5114	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		PIC2	0IPH259500A	IC,PHILIPS	TDA2595 18D H-COMBINATION	
		PIC3	0IGS452800A	IC, GOLDSTAR ELECTRON	GD4528B	
		PIC4	0ISM908800A	IC, SIEMENS	SDA9088(CONTROLLER-SIEMENS)	
		PIC5	0ISM908720A	IC,SIEMENS	SDA9087-2 28D A/D CONVERTER	
		PIC6	0ISM908600A	IC, SIEMENS	SDA9086(PLL-SIEMENS)	
		PIC7	0IPH465000A	IC, PHILIPS	TDA4650(PHILIPS)	
		PIC8	0IPH466120A	IC,PHILIPS	TDA4661/V2 16D 1H DELAY LINE	
		PIC9	0IKE780500D	IC,KEC	KIA7805P(KIA78005AP),KEC	
		PL1	0LA0102K139	INDUCTOR AXIAL LEAD	10UH K 4*10.5 TP	
		PL10	150-489C	COIL	DELAY MATRIX ADJ.	
		PL11	0LA0102K139	INDUCTOR AXIAL LEAD	10UH K 4*10.5 TP	
		PL2	0LA0102K139	INDUCTOR AXIAL LEAD	10UH K 4*10.5 TP	
		PL5	0LA0102K139	INDUCTOR AXIAL LEAD	10UH K 4*10.5 TP	
		PL6	0LA0102K139	INDUCTOR AXIAL LEAD	10UH K 4*10.5 TP	
		PL7	0LA0681K119	INDUCTOR AXIAL LEAD	6.8UH K 2.3*3.4 TP	
		PL8	0LA0102K139	INDUCTOR AXIAL LEAD	10UH K 4*10.5 TP	
		PL9	150-489B	COIL	SECAM BELL FILTER	
		PL99	0LA0272K119	INDUCTOR AXIAL LEAD	27UH K 2.3*3.4 TP	
		PQ1	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		PQ10	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		PQ2	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		PQ3	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		PQ4	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		PQ5	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		PQ6	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		PR10	0RD1003F609	R,CARBON FILM	100K 1/6W 5	
		PR100	0RD6804F609	RESISTOR,FIXED CARBON FILM	6.8M 1/6W 5 TA52	
		PR11	0RD4701F609	R,CARBON FILM	4.7K 1/6W 5	
		PR110	0RD5600F609	R,CARBON FILM	560 1/6W 5	
		PR111	0RD5600F609	R,CARBON FILM	560 1/6W 5	
		PR12	0RN1002F409	RESISTOR,FIX METAL FILM	10K 1/6W 1 TA52	
		PR13	0RD8200F609	R,CARBON FILM	820 1/6W 5	
		PR14	0RD6800F609	R,CARBON FILM	680 1/6W 5	
		PR15	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		PR16	0RD3301F609	R,CARBON FILM	3.3K 1/6W 5	
		PR17	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		PR18	0RD3001F609	R,CARBON FILM	3.0K 1/6W 5	
		PR19	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		PR20	0RD4700F609	R,CARBON FILM	470 1/6W 5	
		PR21	0RD5102F609	R,CARBON FILM	51K 1/6W 5	
		PR22	0RD5100F609	R,CARBON FILM	510 1/6W 5	
		PR23	0RD1201F609	R,CARBON FILM	1.2K 1/6W 5	
		PR24	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		PR27	0RD3601F609	R,CARBON FILM	3.6K 1/6W 5	
		PR29	0RD1801F609	R,CARBON FILM	1.8K 1/6W 5	
		PR3	0RD2201F609	R,CARBON FILM	2.2K 1/6W 5	
		PR30	0RD1503F609	R,CARBON FILM	150K 1/6W 5	
		PR31	0RD3302F609	R,CARBON FILM	33K 1/6W 5	
		PR32	0RD1003F609	R,CARBON FILM	100K 1/6W 5	
		PR33	0RD3301F609	R,CARBON FILM	3.3K 1/6W 5	

「REPLACEMENT PARTS LIST」 P A G E : 14

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		PR34	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		PR35	0RD3300F609	R.CARBON FILM	330 1/6W 5	
		PR36	0RD4702F609	R.CARBON FILM	47K 1/6W 5	
		PR37	0RD4702F609	R.CARBON FILM	47K 1/6W 5	
		PR38	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		PR39	0RD6800F609	R.CARBON FILM	680 1/6W 5	
		PR4	0RD4701F609	R.CARBON FILM	4.7K 1/6W 5	
		PR40	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		PR41	0RD6800F609	R.CARBON FILM	680 1/6W 5	
		PR42	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		PR43	0RD6800F609	R.CARBON FILM	680 1/6W 5	
		PR47	0RD3601F609	R.CARBON FILM	3.6K 1/6W 5	
		PR49	0RD5600F609	R.CARBON FILM	560 1/6W 5	
		PR5	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		PR51	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		PR52	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		PR53	0RD2402F609	R.CARBON FILM	24K 1/6W 5	
		PR54	0RD4701F609	R.CARBON FILM	4.7K 1/6W 5	
		PR55	0RD5102F609	R.CARBON FILM	51K 1/6W 5	
		PR56	0RD3902F609	R.CARBON FILM	39K 1/6W 5	
		PR57	0RD3901F609	R.CARBON FILM	3.9K 1/6W 5	
		PR58	0RD3901F609	R.CARBON FILM	3.9K 1/6W 5	
		PR59	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		PR6	0RD4701F609	R.CARBON FILM	4.7K 1/6W 5	
		PR60	0RD6800F609	R.CARBON FILM	680 1/6W 5	
		PR61	0RD2001F609	R.CARBON FILM	2.0K 1/6W 5	
		PR63	0RD6800G609	R.CARBON FILM	680 1/4W 5	
		PR64	0RD2402F609	R.CARBON FILM	24K 1/6W 5	
		PR65	0RD3300F609	R.CARBON FILM	330 1/6W 5	
		PR66	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		PR67	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		PR68	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		PR69	0RD4301H609	RESISTOR.FIXED CARBON FILM	4.3K 1/2W 5 TA52	
		PR7	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		PR70	0RD2401G609	R.CARBON FILM	2.4K 1/4W 5	
		PR71	0RD0822H609	R.CARBON FILM	82 1/2W 5	
		PR72	0RD0822H609	R.CARBON FILM	82 1/2W 5	
		PR73	0RD1200H609	R.CARBON FILM	120 1/2W 5	
		PR74	0RD1200H609	R.CARBON FILM	120 1/2W 5	
		PR75	0RD2701G609	R.CARBON FILM	2.7K 1/4W 5	
		PR76	0RD3302F609	R.CARBON FILM	33K 1/6W 5	
		PR77	0RD3901F609	R.CARBON FILM	3.9K 1/6W 5	
		PR78	0RD1802F609	R.CARBON FILM	18K 1/6W 5	
		PR79	0RD6201F609	R.CARBON FILM	6.2K 1/6W 5	
		PR8	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		PR80	0RD3301F609	R.CARBON FILM	3.3K 1/6W 5	
		PR81	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		PR82	0RD3300F609	R.CARBON FILM	330 1/6W 5	
		PR83	0RD6800F609	R.CARBON FILM	680 1/6W 5	
		PR84	0RD5600F609	R.CARBON FILM	560 1/6W 5	

「REPLACEMENT PARTS LIST」 P A G E : 15

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		PR85	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		PR86	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		PR87	0RD5600F609	R.CARBON FILM	560 1/6W 5	
		PR88	0RD1004F609	R.CARBON FILM	1.0M 1/6W 5	
		PR89	0RD3300F609	R.CARBON FILM	330 1/6W 5	
		PR9	0RN2003F609	RESISTOR FIX METAL FILM	200K 1/6W 5 TA52	
		PR90	0RD3000F609	R.CARBON FILM	300 1/6W 5	
		PR91	0RD3000F609	R.CARBON FILM	300 1/6W 5	
		PR92	0RD3000F609	R.CARBON FILM	300 1/6W 5	
		PR93	0RD1502F609	R.CARBON FILM	15K 1/6W 5	
		PR97	0RD1004F609	R.CARBON FILM	1.0M 1/6W 5	
		PR98	0RD6804F609	RESISTOR.FIXED CARBON FILM	6.8M 1/6W 5 TA52	
		PR99	0RD6804F609	RESISTOR.FIXED CARBON FILM	6.8M 1/6W 5 TA52	
		PVC1	181-169A	CAPACITOR	CAPACITOR TRIMMER 4.5P-20P	
		PVC2	181-169A	CAPACITOR	CAPACITOR TRIMMER 4.5P-20P	
		PVR1	0RV1503D230	VARIABLE.CARBON FILM	50K 6 ST	
		PVR2	0RV1501D230	VARIABLE.CARBON FILM	500 6 ST	
		PX1	156-007E	OSCILLATOR	X-TAL 7.159090 MHZ	
		PX2	156-007A	OSCILLATOR	X-TAL 8.86 MHZ	
		PZD1	0DZ560009AA	DIODE ZENER	MTZ5.6B.TP(52MM).ROHM	
		PZD2	0DZ560009AA	DIODE ZENER	MTZ5.6B.TP(52MM).ROHM	
		PZD3	0DZ560009AA	DIODE ZENER	MTZ5.6B.TP(52MM).ROHM	
		PZD4	0DZ560009AA	DIODE ZENER	MTZ5.6B.TP(52MM).ROHM	
		PZ1	166-201A	FILTER	DS306-55Y5S 271M 50V	
		PZ2	166-201A	FILTER	DS306-55Y5S 271M 50V	
		PZ3	166-201A	FILTER	DS306-55Y5S 271M 50V	
		PZ4	166-203A	FILTER	DS306-55FZ103N	
		P105A	343-854B	SUPPORTER	PCB(DACN-8N)	
		P851	387-A03C	CONNECTOR ASSY	ASSY.3P (L=200)	
		P852	387-A09D	CONNECTOR ASSY	ASSY.9P (L=250)	
		Q1	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q10	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q11	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q110	0TR102009AB	TRANSISTOR	KRC102M.TP(KRC1202).KEC	
		Q111	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q112	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q113	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q12	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q13	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q151	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q152	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q153	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q154	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q155	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q156	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q16	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q200	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q201	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q202	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q204	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	

「REPLACEMENT PARTS LIST」 P A G E : 16

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		Q301	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q302	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q4	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q403	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q404	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q405	0TR206800BA	TRANSISTOR	KTC2068.KEC	
		Q406	0TR188600AA	TRANSISTOR	2SD1886.SANYO	
		Q451	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q453	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q454	0TR102009AB	TRANSISTOR	KRC102M.TP(KRC1202).KEC	
		Q5	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q502	0TR102009AB	TRANSISTOR	KRC102M.TP(KRC1202).KEC	
		Q503	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q504	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q505	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q505	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q506	0TR102009AB	TRANSISTOR	KRC102M.TP(KRC1202).KEC	
		Q6	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q601	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q650	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q7	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q8	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q801	0TF910000AA	FET	BUZ91A TO-220AB SIEMENS	
		Q801	0TR135100AB	TRANSISTOR	KTD1351-Y(KTD880).KEC	
		Q802	0TR320509AA	TRANSISTOR	KTC3205-O TP(KTC2236A).KEC	
		Q803	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q804	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q805	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q9	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q901	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q902	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q911	0TR206800BA	TRANSISTOR	KTC2068.KEC	
		Q912	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q921	0TR206800BA	TRANSISTOR	KTC2068.KEC	
		Q922	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q931	0TR206800BA	TRANSISTOR	KTC2068.KEC	
		Q932	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		RA1	167-040A	IC	R-ARRAY(12X47K)	
		RA2	167-040C	IC	R-ARRAY(8X10K)	
		RA3	167-040K	IC	4.7KOHM(4.7K*4)	
		RL801	141-013B	RELAY	HR-CR323DC12V(HANGUK)	
		RL802	141-013A	RELAY	HR-CR323DC5V(HANGUK)	
		R1	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R10	0RD5601F609	R.CARBON FILM	5.6K 1/6W 5	
		R101	0RD4704F609	R.CARBON FILM	4.7M 1/6W 5	
		R102	0RD4704F609	R.CARBON FILM	4.7M 1/6W 5	
		R103	0RD4704F609	R.CARBON FILM	4.7M 1/6W 5	
		R104	0RD4704F609	R.CARBON FILM	4.7M 1/6W 5	
		R105	0RD8202F609	R.CARBON FILM	82K 1/6W 5	
		R106	0RD1003F609	R.CARBON FILM	100K 1/6W 5	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R11	0RD5601F609	R.CARBON FILM	5.6K 1/6W 5	
		R110	0RD3300F609	R.CARBON FILM	330 1/6W 5	
		R111	0RD2202F609	R.CARBON FILM	22K 1/6W 5	
		R112	0RD5601F609	R.CARBON FILM	5.6K 1/6W 5	
		R113	0RD2200G609	RESISTOR.FIXED CARBON FILM	220 1/4W 5 TA52	
		R114	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R115	0RD0272F609	R.CARBON FILM	27 1/6W 5%	
		R116	0RD6800F609	R.CARBON FILM	680 1/6W 5	
		R117	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R118	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R119	0RD1302F609	R.CARBON FILM	13K 1/6W 5	
		R12	0RD2402F609	R.CARBON FILM	24K 1/6W 5	
		R120	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R121	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R122	0RD5601F609	R.CARBON FILM	5.6K 1/6W 5	
		R123	0RD2002F609	R.CARBON FILM	20K 1/6W 5	
		R124	0RD2201F609	R.CARBON FILM	2.2K 1/6W 5	
		R125	0RD4701G609	R.CARBON FILM	4.7K 1/4W 5	
		R126	0RD2202F609	R.CARBON FILM	22K 1/6W 5	
		R127	0RD4702F609	R.CARBON FILM	47K 1/6W 5	
		R128	0RD1000F609	R.CARBON FILM	100 1/6W 5	
		R129	0RD0682F609	RESISTOR.FIXED CARBON FILM	68 1/6W 5 TA52	
		R13	0RD2402F609	R.CARBON FILM	24K 1/6W 5	
		R130	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R131	0RD5600F609	R.CARBON FILM	560 1/6W 5	
		R132	0RD5600F609	R.CARBON FILM	560 1/6W 5	
		R133	0RD1501F609	R.CARBON FILM	1.5K 1/6W 5	
		R134	0RD1000F609	R.CARBON FILM	100 1/6W 5	
		R135	0RD2702F609	R.CARBON FILM	27K 1/6W 5	
		R136	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R137	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R138	0RD2702F609	R.CARBON FILM	27K 1/6W 5	
		R139	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R14	0RD2402F609	R.CARBON FILM	24K 1/6W 5	
		R140	0RD1502F609	R.CARBON FILM	15K 1/6W 5	
		R141	0RD1202F609	R.CARBON FILM	12K 1/6W 5	
		R15	0RD4702F609	R.CARBON FILM	47K 1/6W 5	
		R151	0RD1801F609	R.CARBON FILM	1.8K 1/6W 5	
		R151	0RD3302F609	R.CARBON FILM	33K 1/6W 5	
		R152	0RD1300G609	RESISTOR.FIXED CARBON FILM	130 1/4W 5 TA52	
		R153	0RD1300G609	RESISTOR.FIXED CARBON FILM	130 1/4W 5 TA52	
		R154	0RD2701F609	R.CARBON FILM	2.7K 1/6W 5	
		R155	0RD2701F609	R.CARBON FILM	2.7K 1/6W 5	
		R156	0RD2201F609	R.CARBON FILM	2.2K 1/6W 5	
		R157	0RD8200F609	R.CARBON FILM	820 1/6W 5	
		R16	0RD4702F609	R.CARBON FILM	47K 1/6W 5	
		R160	0RD1200F609	R.CARBON FILM	120 1/6W 5	
		R161	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R162	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R163	0RD4702F609	R.CARBON FILM	47K 1/6W 5	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R164	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R165	0RD9101F609	R,CARBON FILM	9.1K 1/6W 5	
		R166	0RD1003F609	R,CARBON FILM	100K 1/6W 5	
		R167	0RD6800G609	R,CARBON FILM	680 1/4W 5	
		R168	0RD6800G609	R,CARBON FILM	680 1/4W 5	
		R169	0RD0272F609	R,CARBON FILM	27 1/6W 5%	
		R17	0RD3002F609	R,CARBON FILM	30K 1/6W 5	
		R170	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R171	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R172	0RD2200F609	R,CARBON FILM	220 1/6W 5	
		R173	0RD3001F609	R,CARBON FILM	3.0K 1/6W 5	
		R174	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R175	0RD2201F609	R,CARBON FILM	2.2K 1/6W 5	
		R176	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R177	0RD1004F609	R,CARBON FILM	1.0M 1/6W 5	
		R178	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R179	0RD4701F609	R,CARBON FILM	4.7K 1/6W 5	
		R18	0RD3601F609	R,CARBON FILM	3.6K 1/6W 5	
		R180	0RD1501F609	R,CARBON FILM	1.5K 1/6W 5	
		R181	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R182	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R183	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R184	0RD2700F609	R,CARBON FILM	270 1/6W 5	
		R185	0RD5100F609	R,CARBON FILM	510 1/6W 5	
		R186	0RD3000F609	R,CARBON FILM	300 1/6W 5	
		R187	0RD9102F609	R,CARBON FILM	91K 1/6W 5	
		R188	0RD9102F609	R,CARBON FILM	91K 1/6W 5	
		R189	0RD9102F609	R,CARBON FILM	91K 1/6W 5	
		R19	0RD5601F609	R,CARBON FILM	5.6K 1/6W 5	
		R2	0RD4700F609	R,CARBON FILM	470 1/6W 5	
		R20	0RD3601F609	R,CARBON FILM	3.6K 1/6W 5	
		R200	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R201	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R202	0RD1500F609	R,CARBON FILM	150 1/6W 5	
		R203	0RD0752F609	R,CARBON FILM	75 1/6W 5	
		R204	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R205	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R206	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R207	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R208	0RD0822F609	R,CARBON FILM	82 1/6W 5	
		R209	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R21	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R212	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R213	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R214	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R215	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R218	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R219	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R22	0RD3900F609	R,CARBON FILM	390 1/6W 5	
		R221	0RD4702F609	R,CARBON FILM	47K 1/6W 5	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R222	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R223	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R224	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R225	0RD1500F609	R,CARBON FILM	150 1/6W 5	
		R23	0RD3900F609	R,CARBON FILM	390 1/6W 5	
		R230	0RD0752F609	R,CARBON FILM	75 1/6W 5	
		R231	0RD0752F609	R,CARBON FILM	75 1/6W 5	
		R232	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R233	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R234	0RD2700F609	R,CARBON FILM	270 1/6W 5	
		R235	0RD2201F609	R,CARBON FILM	2.2K 1/6W 5	
		R236	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R237	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R238	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R239	0RD2201F609	R,CARBON FILM	2.2K 1/6W 5	
		R24	0RD3900F609	R,CARBON FILM	390 1/6W 5	
		R241	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R244	0RD0752H609	R,CARBON FILM	75 1/2W 5	
		R247	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R249	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R25	0RD2701F609	R,CARBON FILM	2.7K 1/6W 5	
		R250	0RD1801F609	R,CARBON FILM	1.8K 1/6W 5	
		R251	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R252	0RD2000F609	R,CARBON FILM	200 1/6W 5	
		R254	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R255	0RD1201F609	R,CARBON FILM	1.2K 1/6W 5	
		R256	0RD3301F609	R,CARBON FILM	3.3K 1/6W 5	
		R257	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R258	0RD2201F609	R,CARBON FILM	2.2K 1/6W 5	
		R259	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R26	0RD2701F609	R,CARBON FILM	2.7K 1/6W 5	
		R260	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R261	0RD2201F609	R,CARBON FILM	2.2K 1/6W 5	
		R27	0RD2701F609	R,CARBON FILM	2.7K 1/6W 5	
		R28	0RD4300F609	R,CARBON FILM	430 1/6W 5	
		R3	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R30	0RD4701F609	R,CARBON FILM	4.7K 1/6W 5	
		R301	0RD3002F609	R,CARBON FILM	30K 1/6W 5	
		R302	0RD2403F609	R,CARBON FILM	240K 1/6W 5	
		R303	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R304	0RD5600F609	R,CARBON FILM	560 1/6W 5	
		R305	0RD1001G609	R,CARBON FILM	1K 1/4W 5	
		R306	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R307	0RD6201F609	R,CARBON FILM	6.2K 1/6W 5	
		R308	0RD4702G609	R,CARBON FILM	47K 1/4W 5	
		R309	0RD1002G609	R,CARBON FILM	10K 1/4W 5	
		R31	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R310	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R311	0RS1201J607	R,METAL FILM OXIDE	1.20K 1W 5%	
		R312	0RS1201J607	R,METAL FILM OXIDE	1.20K 1W 5%	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R314	0RD1802F609	R,CARBON FILM	18K 1/6W 5	
		R315	0RD2402F609	R,CARBON FILM	24K 1/6W 5	
		R316	0RS1502H609	RESISTOR,FIX METAL FILM OXIDE	15K 1/2W 5 TA52	
		R317	0RD2001G609	R,CARBON FILM	2.0K 1/4W 5	
		R318	0RS2200J607	R,METAL FILM OXIDE	220 1W 5%	
		R319	0RD2201F609	R,CARBON FILM	2.2K 1/6W 5	
		R32	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R320	0RS0161K607	RESISTOR,FIX METAL FILM OXIDE	1.60 2W 5% TA62	
		R321	0RD7500F609	R,CARBON FILM	750 1/6W 5	
		R322	0RD7500F609	R,CARBON FILM	750 1/6W 5	
		R33	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R34	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R35	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R38	0RD2002F609	R,CARBON FILM	20K 1/6W 5	
		R39	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R40	0RD3302F609	R,CARBON FILM	33K 1/6W 5	
		R401	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R402	0RD3601F609	R,CARBON FILM	3.6K 1/6W 5	
		R404	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R405	0RD0822G609	R,CARBON FILM	82 1/4W 5	
		R406	0RD4700F609	R,CARBON FILM	470 1/6W 5	
		R407	0RD3001F609	R,CARBON FILM	3.0K 1/6W 5	
		R408	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R409	0RD2403F609	R,CARBON FILM	240K 1/6W 5	
		R41	0RD3302F609	R,CARBON FILM	33K 1/6W 5	
		R410	0RD1000F609	R,CARBON FILM	100 1/6W 5	
		R411	0RD2702F609	R,CARBON FILM	27K 1/6W 5	
		R412	0RD0102F609	RESISTOR,FIXED CARBON FILM	10 1/6W 5 TA52	
		R413	0RD2200F609	R,CARBON FILM	220 1/6W 5	
		R414	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R415	0RD1600F609	R,CARBON FILM	160 1/6W 5	
		R42	0RD3302F609	R,CARBON FILM	33K 1/6W 5	
		R422	0RD4300F609	R,CARBON FILM	430 1/6W 5	
		R423	0RD1800F609	R,CARBON FILM	180 1/6W 5	
		R424	0RD5101H609	R,CARBON FILM	5.1K 1/2W 5	
		R425	0RS6801K607	R,METAL FILM OXIDE	6.80K 2W 5%	
		R426	0RS6801K607	R,METAL FILM OXIDE	6.80K 2W 5%	
		R428	0RD0332H609	R,CARBON FILM	33 1/2W 5	
		R429	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R43	0RD4701F609	R,CARBON FILM	4.7K 1/6W 5	
		R430	0RD2001H609	R,CARBON FILM	2.0K 1/2W 5	
		R431	0RD6200G609	RESISTOR,FIXED CARBON FILM	620 1/4W 5 TA52	
		R432	0RD2701F609	R,CARBON FILM	2.7K 1/6W 5	
		R433	0RD5601H609	R,CARBON FILM	5.6K 1/2W 5	
		R434	0RD5102G609	R,CARBON FILM	51K 1/4W 5	
		R435	0RD5102G609	R,CARBON FILM	51K 1/4W 5	
		R436	0RD1002G609	R,CARBON FILM	10K 1/4W 5	
		R437	0RD4701F609	R,CARBON FILM	4.7K 1/6W 5	
		R44	0RD4701F609	R,CARBON FILM	4.7K 1/6W 5	
		R440	0RD2001H609	R,CARBON FILM	2.0K 1/2W 5	

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MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R45	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R452	0RD1003F609	R,CARBON FILM	100K 1/6W 5	
		R453	0RD1102F609	R,CARBON FILM	11K 1/6W 5	
		R454	0RD2703F609	R,CARBON FILM	270K 1/6W 5	
		R455	0RD8201F609	R,CARBON FILM	8.2K 1/6W 5	
		R456	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R457	0RD3002F609	R,CARBON FILM	30K 1/6W 5	
		R458	0RD3901F609	R,CARBON FILM	3.9K 1/6W 5	
		R46	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R460	0RD2701F609	R,CARBON FILM	2.7K 1/6W 5	
		R461	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R462	0RD2402F609	R,CARBON FILM	24K 1/6W 5	
		R463	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R464	0RD1302F609	R,CARBON FILM	13K 1/6W 5	
		R465	0RD2702F609	R,CARBON FILM	27K 1/6W 5	
		R47	0RD1502F609	R,CARBON FILM	15K 1/6W 5	
		R48	0RD4702F609	R,CARBON FILM	47K 1/6W 5	
		R49	0RD6801F609	R,CARBON FILM	6.8K 1/6W 5	
		R50	0RD2002F609	R,CARBON FILM	20K 1/6W 5	
		R501	0RD8201F609	R,CARBON FILM	8.2K 1/6W 5	
		R502	0RD5602F609	R,CARBON FILM	56K 1/6W 5	
		R506	0RD6201F609	R,CARBON FILM	6.2K 1/6W 5	
		R507	0RD6801F609	R,CARBON FILM	6.8K 1/6W 5	
		R51	0RD1502F609	R,CARBON FILM	15K 1/6W 5	
		R510	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R511	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R512	0RD2202F609	R,CARBON FILM	22K 1/6W 5	
		R513	0RD2701F609	R,CARBON FILM	2.7K 1/6W 5	
		R514	0RD5600F609	R,CARBON FILM	560 1/6W 5	
		R515	0RD8201F609	R,CARBON FILM	8.2K 1/6W 5	
		R516	0RD2701F609	R,CARBON FILM	2.7K 1/6W 5	
		R517	0RD4301F609	R,CARBON FILM	4.3K 1/6W 5	
		R518	0RD1002F609	R,CARBON FILM	10K 1/6W 5	
		R519	0RD3900F609	R,CARBON FILM	390 1/6W 5	
		R520	0RD2001F609	R,CARBON FILM	2.0K 1/6W 5	
		R521	0RD5603F609	R,CARBON FILM	560K 1/6W 5	
		R522	0RD3000F609	R,CARBON FILM	300 1/6W 5	
		R523	0RD3302F609	R,CARBON FILM	33K 1/6W 5	
		R524	0RD2200F609	R,CARBON FILM	220 1/6W 5	
		R526	0RD5603F609	R,CARBON FILM	560K 1/6W 5	
		R527	0RD4704F609	R,CARBON FILM	4.7M 1/6W 5	
		R528	0RD4704F609	R,CARBON FILM	4.7M 1/6W 5	
		R529	0RD1501F609	R,CARBON FILM	1.5K 1/6W 5	
		R530	0RD1501F609	R,CARBON FILM	1.5K 1/6W 5	
		R532	0RD5603F609	R,CARBON FILM	560K 1/6W 5	
		R533	0RD1001F609	R,CARBON FILM	1.0K 1/6W 5	
		R534	0RD3301F609	R,CARBON FILM	3.3K 1/6W 5	
		R536	0RD8201F609	R,CARBON FILM	8.2K 1/6W 5	
		R537	0RD5600F609	R,CARBON FILM	560 1/6W 5	
		R538	0RD1501F609	R,CARBON FILM	1.5K 1/6W 5	

ᴇREPLACEMENT PARTS LISTɪ PAGE : 22

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R539	0RD1601F609	R.CARBON FILM	1.6K 1/6W 5	
		R54	0RD4301F609	R.CARBON FILM	4.3K 1/6W 5	
		R540	0RD2701F609	R.CARBON FILM	2.7K 1/6W 5	
		R541	0RD2201F609	R.CARBON FILM	2.2K 1/6W 5	
		R542	0RD1003F609	R.CARBON FILM	100K 1/6W 5	
		R544	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R547	0RD2201F609	R.CARBON FILM	2.2K 1/6W 5	
		R548	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		R549	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		R55	0RD2701F609	R.CARBON FILM	2.7K 1/6W 5	
		R550	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		R551	0RD6800G609	R.CARBON FILM	680 1/4W 5	
		R552	0RD3302F609	R.CARBON FILM	33K 1/6W 5	
		R553	0RD4700F609	R.CARBON FILM	470 1/6W 5	
		R554	0RD6801F609	R.CARBON FILM	6.8K 1/6W 5	
		R555	0RD2701F609	R.CARBON FILM	2.7K 1/6W 5	
		R556	0RD1000F609	R.CARBON FILM	100 1/6W 5	
		R557	0RD3302F609	R.CARBON FILM	33K 1/6W 5	
		R558	0RD3301F609	R.CARBON FILM	3.3K 1/6W 5	
		R559	0RD2201F609	R.CARBON FILM	2.2K 1/6W 5	
		R6	0RD4700F609	R.CARBON FILM	470 1/6W 5	
		R60	0RD1004F609	R.CARBON FILM	1.0M 1/6W 5	
		R601	0RD0102H609	R.CARBON FILM	10 1/2W 5	
		R603	0RD2201H609	RESISTOR.FIXED CARBON FILM	2.2K 1/2W 5 TA52	
		R604	0RD0102H609	R.CARBON FILM	10 1/2W 5	
		R606	0RD1301F609	R.CARBON FILM	1.3K 1/6W 5	
		R609	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R610	0RD0392F609	RESISTOR.FIXED CARBON FILM	39 1/6W 5 TA52	
		R612	0RD2400F609	R.CARBON FILM	240 1/6W 5	
		R613	0RD2400F609	R.CARBON FILM	240 1/6W 5	
		R618	0RD1301F609	R.CARBON FILM	1.3K 1/6W 5	
		R619	0RD0392F609	RESISTOR.FIXED CARBON FILM	39 1/6W 5 TA52	
		R650	0RD1501F609	R.CARBON FILM	1.5K 1/6W 5	
		R652	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R653	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R654	0RD4702F609	R.CARBON FILM	47K 1/6W 5	
		R655	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R656	0RD4702F609	R.CARBON FILM	47K 1/6W 5	
		R657	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R658	0RD1301F609	R.CARBON FILM	1.3K 1/6W 5	
		R659	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R660	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R801	180-783D	RESISTOR	RC 1/2W 474 K TAPING	
		R802	180-344H	R.CEMENT RWR	1 OHM 10W J	
		R803	0RD2003H609	R.CARBON FILM	200K 1/2W 5	
		R804	0RS2202L667	RESISTOR.FIX METAL FILM OXIDE	22K 3W 5 SF30	
		R805	0RD6803H609	R.CARBON FILM	680K 1/2W 5	
		R806	0RD1202H609	R.CARBON FILM	12K 1/2W 5	
		R807	0RD1503H609	R.CARBON FILM	150K 1/2W 5	
		R808	0RD1203H609	R.CARBON FILM	120K 1/2W 5	

ᴇREPLACEMENT PARTS LISTɪ PAGE : 23

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R810	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		R811	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R812	0RD3001F609	R.CARBON FILM	3.0K 1/6W 5	
		R813	0RD0272H609	R.CARBON FILM	27 1/2W 5	
		R815	0RS0472K607	RESISTOR.FIX METAL FILM OXIDE	47 2W 5% TA62	
		R816	0RS1202L667	RESISTOR.FIX METAL FILM OXIDE	12K 3W 5 SF30	
		R817	0RS0332K607	RESISTOR.FIX METAL FILM OXIDE	33 2W 5% TA62	
		R818	0RD0472H609	R.CARBON FILM	47 1/2W 5	
		R819	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R820	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R821	0RD2200H609	R.CARBON FILM	220 1/2W 5	
		R822	0RD0102F609	RESISTOR.FIXED CARBON FILM	10 1/6W 5 TA52	
		R823	180-783G	RESISTOR	RC 1/2W 825 K TAPING	
		R824	0RD4701F609	R.CARBON FILM	4.7K 1/6W 5	
		R825	0RD2202H609	RESISTOR.FIXED CARBON FILM	22K 1/2W 5 TA52	
		R826	0RD4702H609	RESISTOR.FIXED CARBON FILM	47K 1/2W 5 TA52	
		R827	0RD1003F609	R.CARBON FILM	100K 1/6W 5	
		R828	0RD2200F609	R.CARBON FILM	220 1/6W 5	
		R829	0RD1501F509	RESISTOR.FIXED CARBON FILM	1.5K 1/6W 2 TA52	
		R830	0RD6800F609	R.CARBON FILM	680 1/6W 5	
		R831	180-344R	RESISTOR.CEMENT RWR	220 OHM 10W	
		R832	0RS2202K607	R.METAL FILM OXIDE	22K 2W 5%	
		R833	0RD2201F609	R.CARBON FILM	2.2K 1/6W 5	
		R834	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R835	0RD2003F609	R.CARBON FILM	200K 1/6W 5	
		R836	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R837	0RD4704F609	R.CARBON FILM	4.7M 1/6W 5	
		R839	0RD0471H609	R.CARBON FILM	4.7 1/2W 5	
		R840	0RD1303H609	R.CARBON FILM	130K 1/2W 5	
		R841	0RS4701J607	RESISTOR.FIX METAL FILM OXIDE	4.70K 1W 5% TA62	
		R842	0RD2003H609	R.CARBON FILM	200K 1/2W 5	
		R9	0RD5601F609	R.CARBON FILM	5.6K 1/6W 5	
		R901	0RD1003H609	R.CARBON FILM	100K 1/2W 5	
		R903	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R904	0RD1801F609	R.CARBON FILM	1.8K 1/6W 5	
		R905	0RD3301F609	R.CARBON FILM	3.3K 1/6W 5	
		R906	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R907	0RD1001F609	R.CARBON FILM	1.0K 1/6W 5	
		R908	0RD3300F609	R.CARBON FILM	330 1/6W 5	
		R909	0RD1002F609	R.CARBON FILM	10K 1/6W 5	
		R912	0RD1000F609	R.CARBON FILM	100 1/6W 5	
		R913	0RD3900F609	R.CARBON FILM	390 1/6W 5	
		R914	0RD0272F609	R.CARBON FILM	27 1/6W 5%	
		R915	0RD3000F609	R.CARBON FILM	300 1/6W 5	
		R916	0RS2702K607	RESISTOR.FIX METAL FILM OXIDE	27K 2W 5% TA62	
		R917	0RS2702K607	RESISTOR.FIX METAL FILM OXIDE	27K 2W 5% TA62	
		R918	0RD2701G609	R.CARBON FILM	2.7K 1/4W 5	
		R920	0RD3900F609	R.CARBON FILM	390 1/6W 5	
		R922	0RD1000F609	R.CARBON FILM	100 1/6W 5	
		R923	0RD5100F609	R.CARBON FILM	510 1/6W 5	

ᴇREPLACEMENT PARTS LISTɪ PAGE : 24

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R924	0RD0272F609	R.CARBON FILM	27 1/6W 5%	
		R925	0RD3900F609	R.CARBON FILM	390 1/6W 5	
		R926	0RS2702K607	RESISTOR.FIX METAL FILM OXIDE	27K 2W 5% TA62	
		R927	0RS2702K607	RESISTOR.FIX METAL FILM OXIDE	27K 2W 5% TA62	
		R928	0RD2701G609	R.CARBON FILM	2.7K 1/4W 5	
		R932	0RD1000F609	R.CARBON FILM	100 1/6W 5	
		R933	0RD3900F609	R.CARBON FILM	390 1/6W 5	
		R934	0RD0272F609	R.CARBON FILM	27 1/6W 5%	
		R935	0RD3900F609	R.CARBON FILM	390 1/6W 5	
		R936	0RS2702K607	RESISTOR.FIX METAL FILM OXIDE	27K 2W 5% TA62	
		R937	0RS2702K607	RESISTOR.FIX METAL FILM OXIDE	27K 2W 5% TA62	
		R938	0RD2701G609	R.CARBON FILM	2.7K 1/4W 5	
		SG901	165-004A	SPARK GAP	AG20PT 152F-L3N/S-23	
		SW1	140-248D	SWITCH	TACT S/W 2P.SKHHNJ	
		SW2	140-248D	SWITCH	TACT S/W 2P.SKHHNJ	
		SW3	140-248D	SWITCH	TACT S/W 2P.SKHHNJ	
		SW301	140-111A	SWITCH	SVC P12T21	
		SW302	140-111A	SWITCH	SVC P12T21	
		SW4	140-248D	SWITCH	TACT S/W 2P.SKHHNJ	
		SW5	140-248D	SWITCH	TACT S/W 2P.SKHHNJ	
		SW6	140-248D	SWITCH	TACT S/W 2P.SKHHNJ	
		SW601	140-031F	SWITCH	SLIDE SSB022 (25V 1A)	
		SW602	385-102A	TERMINAL	SPEAKER	
		SW603	380-377A	JACK	DIN 01J0193 (S-JACK) WITH S/W	
		SW604	380-065B	JACK	ASSY.PHONO	
		SW605	380-066C	JACK	ASSY.PHONO(THRU-OUT)	
		SW606	380-065D	JACK	ASSY.PHONO	
		SW610	380-065B	JACK	ASSY.PHONO	
		SW611	380-065C	JACK	ASSY.PHONO	
		SW612	380-065D	JACK	ASSY.PHONO	
		SW7	140-248D	SWITCH	TACT S/W 2P.SKHHNJ	
		SW8	140-275B	SWITCH	PUSH SWITCH (NOT LOCKING)	
		SW801	140-289A	SWITCH	SDDF3PASP013(GS-ALPS) TV8	
		TH801	163-051A	THERMISTOR	J5 03 P5 3D 140M 290S	
		TU101	113-207B	TUNER	115-B-4010SF	
		T401	154-179Q	FBT	FCM*179Q-25MP6	
		T402	151-386A	TRANSFORMER	H.DRIVE 19Y4BY	
		T801	151-455A	TRANSFORMER	SMPS (155V/120V)	
		VC110	181-069B	CAPACITOR	TRIMMER	
		VR110	0RV1203D230	VARIABLE.CARBON FILM	20K 6 ST	
		VR301	180-451K	R.VARIABLE	EVN-DJAA03 B473 HORIZONTAL<TA>	
		VR401	180-451C	R.VARIABLE	EVN-DJAA03 B501 HORIZONTAL<TA>	
		VR451	0RV1103D330	VARIABLE RESISTOR.CARBON FILM	10K 6 ST P3 L2.5 5	
		VR452	0RV1473D330	VARIABLE RESISTOR.CARBON FILM	47K 6 ST P3 L2.5 5	
		VR501	180-451D	RESISTOR	EVN-DJAA03 B102 HORIZONTAL<TA>	
		VR503	180-451H	R.VARIABLE	EVN-DJAA03 B103 HORIZONTAL<TA>	
		VR801	0RV1223D330	VARIABLE RESISTOR.CARBON FILM	22K 6 ST P3 L2.5 5	
		VR911	0RV1102D330	VARIABLE RESISTOR.CARBON FILM	1.0K 6 ST P3 L2.5 5	
		VR912	0RV1222D330	VARIABLE RESISTOR.CARBON FILM	2.2K 6 ST P3 L2.5 5	
		VR922	0RV1102D330	VARIABLE RESISTOR.CARBON FILM	1.0K 6 ST P3 L2.5 5	

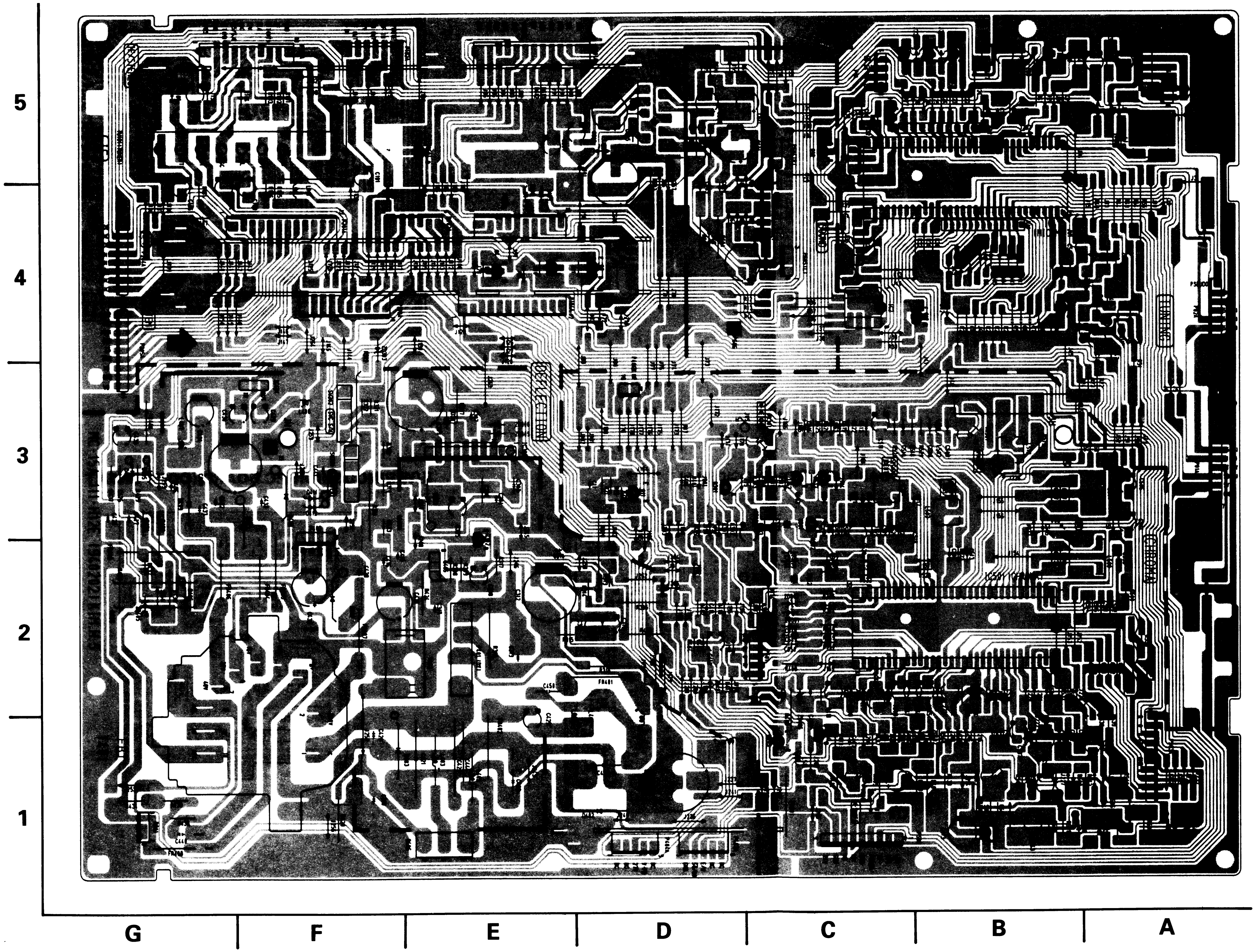
ᴇREPLACEMENT PARTS LISTɪ PAGE : 25

MODEL : CF-29C20P DPGRR SET PART NO : 100-E14E RUN-DATE : 94.03.24

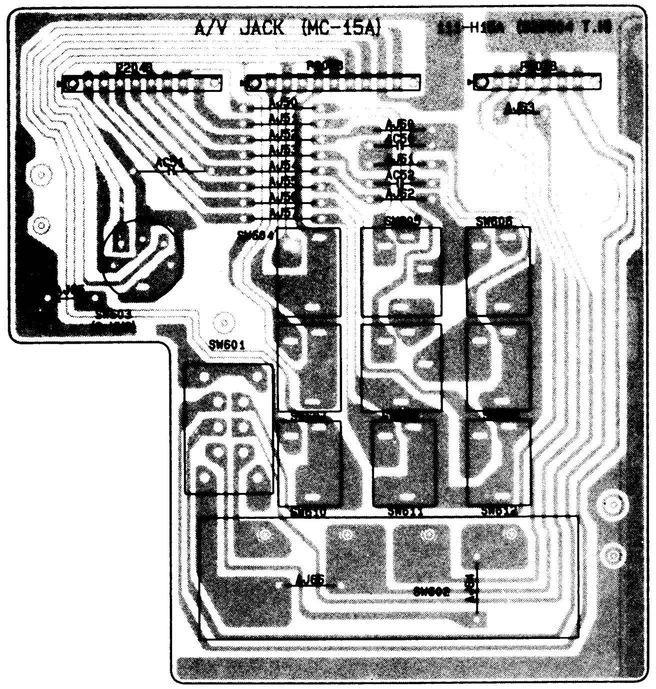
S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		VR931	0RV1102D330	VARIABLE RESISTOR.CARBON FILM	1.0K 6 ST P3 L2.5 5	
		VR932	0RV1222D330	VARIABLE RESISTOR.CARBON FILM	2.2K 6 ST P3 L2.5 5	
		X1	156-007H	OSCILLATOR	4.0MHZ(CL:35PF)	
		X151	166-015B	FILTER	CSB500E	
		X401	166-187A	FILTER	RESONATOR.CSB503F2	
		X501	156-006A	OSCILLATOR	X-TAL 4.43MHZ (18U)	
		X502	156-001C	OSCILLATOR	CRYSTAL 3.58MHZ	
		ZD110	0DZ510009AB	DIODE ZENER	MTZ5.1B.TP(52MM).ROHM	
		ZD200	0DZ910009BA	DIODE ZENER	MTZ9.1B.TP(52MM).ROHM	
		ZD3	0DZ330009BA	DIODE ZENER	HZT33	
		ZD301	0DZ120009AA	DIODE ZENER	Z12BM TA	
		ZD302	0DZ750009AA	DIODE ZENER	MTZ7.5B.TP(52MM).ROHM	
		ZD303	0DZ360009DA	DIODE ZENER	MTZ3.6B.TP(52MM).ROHM	
		ZD305	0DZ300009BA	DIODE ZENER	MTZ30B.TP(52MM).ROHM	
		ZD306	0DZ300009BA	DIODE ZENER	MTZ30B.TP(52MM).ROHM	
		ZD307	0DZ300009BA	DIODE ZENER	MTZ30B.TP(52MM).ROHM	
		ZD4	0DZ560009AA	DIODE ZENER	MTZ5.6B.TP(52MM).ROHM	
		ZD401	0DZ510009AB	DIODE ZENER	MTZ5.1B.TP(52MM).ROHM	
		ZD402	0DZ910009BA	DIODE ZENER	MTZ9.1B.TP(52MM).ROHM	
		ZD405	0DZ110009AA	DIODE ZENER	MTZ 11B.TP(52MM).ROHM	
		ZD406	0DZ110009AA	DIODE ZENER	MTZ 11B.TP(52MM).ROHM	
		ZD5	0DZ750009AA	DIODE ZENER	MTZ7.5B.TP(52MM).ROHM	
		ZD500	0DZ620009AA	DIODE ZENER	MTZ6.2B.TP(52MM).ROHM	
		ZD501	0DZ620009AA	DIODE ZENER	MTZ6.2B.TP(52MM).ROHM	
		ZD502	0DZ910009BA	DIODE ZENER	MTZ9.1B.TP(52MM).ROHM	
		ZD503	0DZ510009AB	DIODE ZENER	MTZ5.1B.TP(52MM).ROHM	
		ZD802	0ITI431000D	IC.TEXAS INSTRUMENT	TL431ILP LP003 VAR.ZENER	
		ZD904	0DZ180009AA	DIODE ZENER	MTZ18B.TP(52MM).ROHM	
		Z110	166-018A	FILTER	SAW OFWK1950(SIEMENS)	
		Z151	166-002H	FILTER	SFE5.5MB-TF21 (TA)	
		Z152	166-002J	FILTER	SFE6.0MB-TF21 (TA)	
		Z153	166-002K	FILTER	SFE6.5MB-TF21 (TA)	
		Z154	166-031L	FILTER	TPS 5.5MB-TF21(TA)	
		Z155	166-228A	FILTER	CERAMIC TPW03B(5.5/6.0M)	
		Z156	166-120A	FILTER	FILTER CERAMIC TPS 4.5MW	
		Z157	166-003D	FILTER	SFE4.5MB-TF21	
		Z158	166-002J	FILTER	SFE6.0MB-TF21 (TA)	
		Z201	166-019A	FILTER	TRAP TPS4.43MJ	
				*** END OF DATA ***		

PRINTED CIRCUIT BOARD

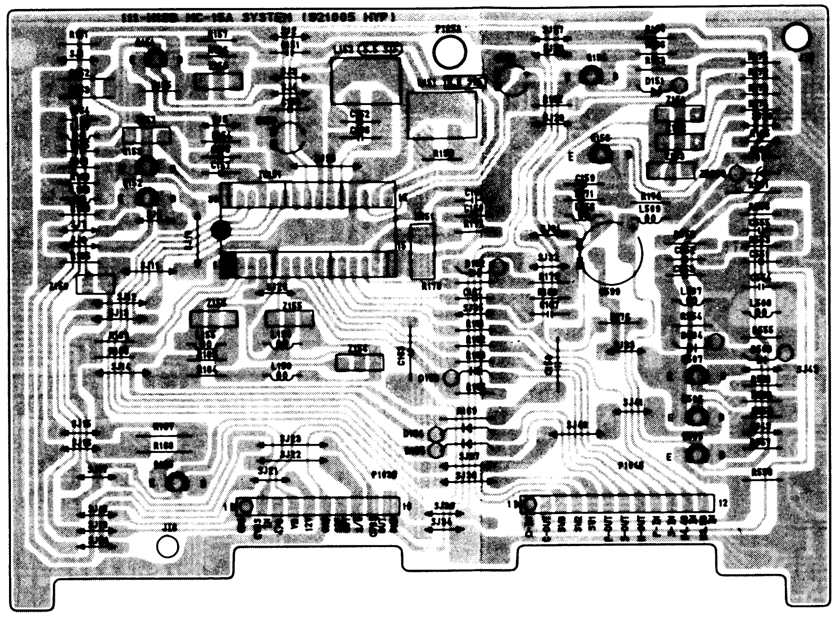
MAIN P.C.BOARD (COMPONENT SIDE)


5
4
3
2
1
G
F
E
D
C
B
A

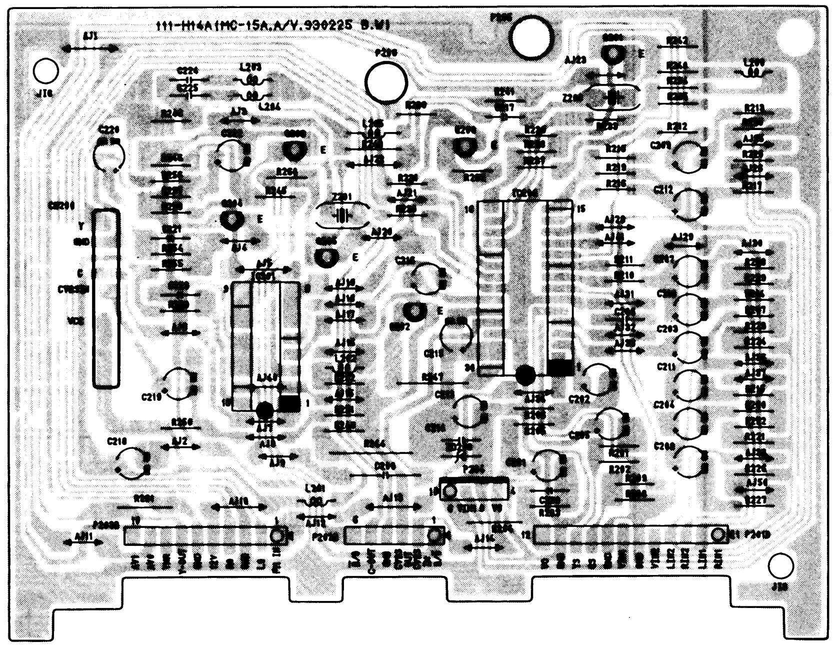
A/V JACK P.C.BOARD (COMPONENT SIDE)


A/V JACK (MC-15A)
SW501
SW502

SYSTEM P.C.BOARD (COMPONENT SIDE)


MC-15A SYSTEM

A/V P.C.BOARD (COMPONENT SIDE)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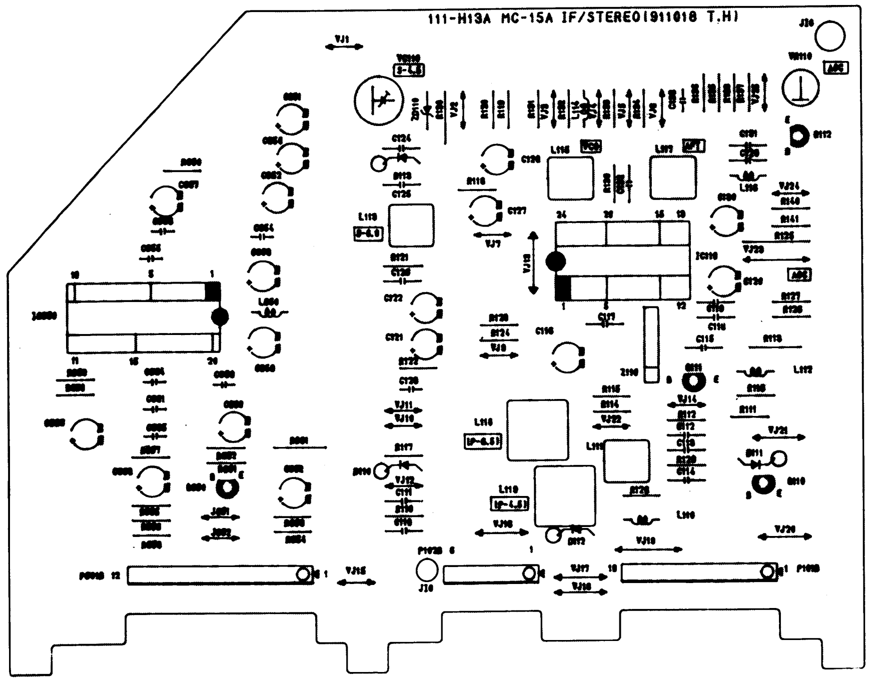
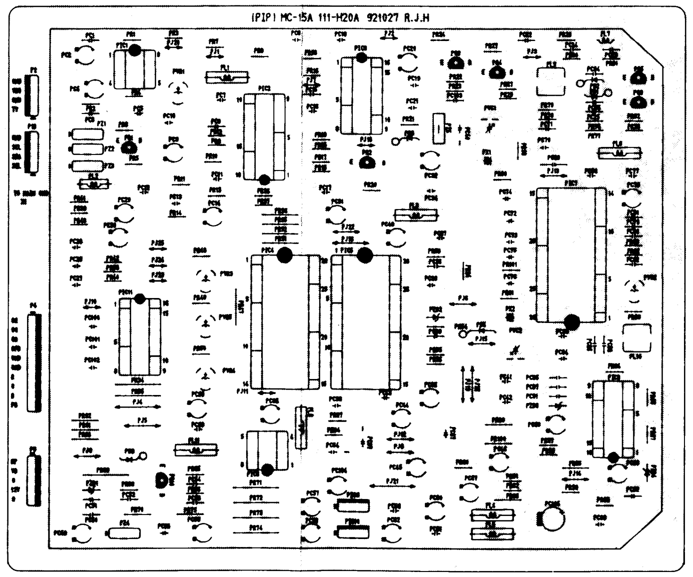
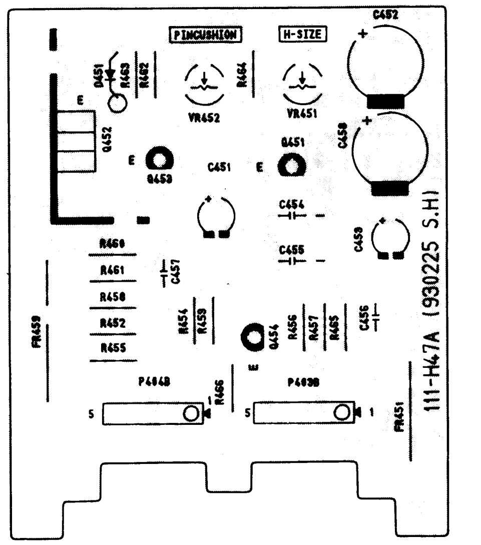
IF/STEREO P.C.BOARD (COMPONENT SIDE)


111-H13A MC-15A IF/STEREO(911018 T.H)

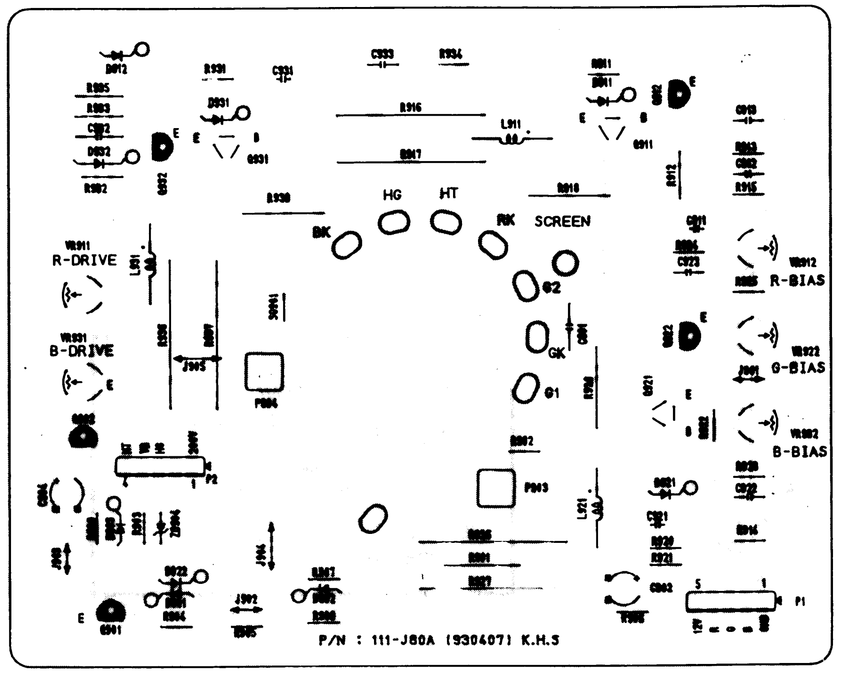
PIP P.C.BOARD (COMPONENT SIDE)


(PIP) MC-15A 111-H20A 921027 R.J.H

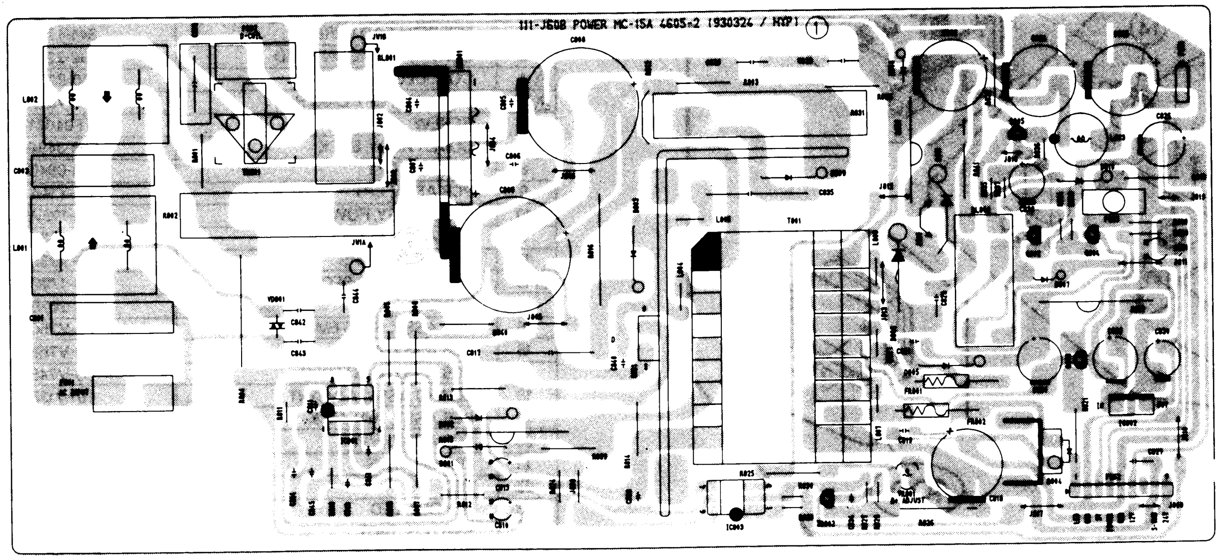
E/W PINCUSHION P.C.BOARD (COMPONENT SIDE)


PINCUSHION
H-SIZE
C452
VR452
VR451
Q451
Q452
Q453
C451
C454
C455
C453
R460
R461
R458
R452
R455
FR459
FR451
111-H47A (930225 S.H)

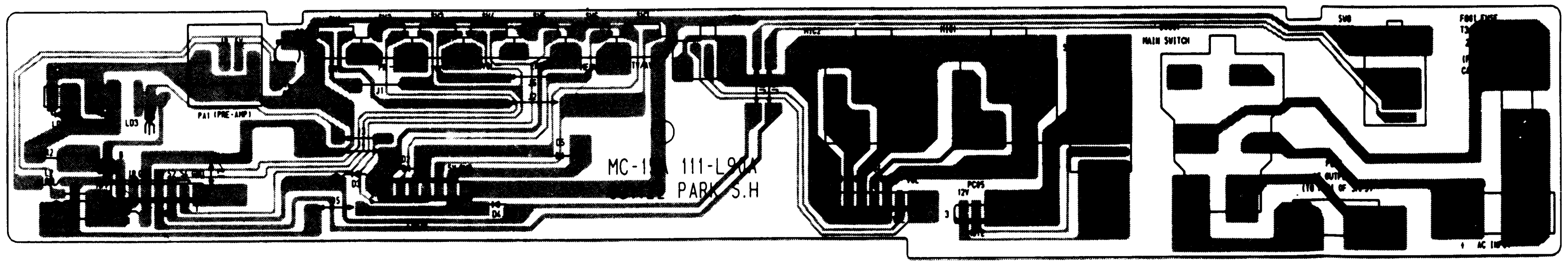
CPT P.C.BOARD (COMPONENT SIDE)


HG
HT
BK
RK
SCREEN
G2
GK
G1
R-DRIVE
B-DRIVE
R-BIAS
G-BIAS
B-BIAS
P1
P2
P/N : 111-J80A (930407) K.H.S

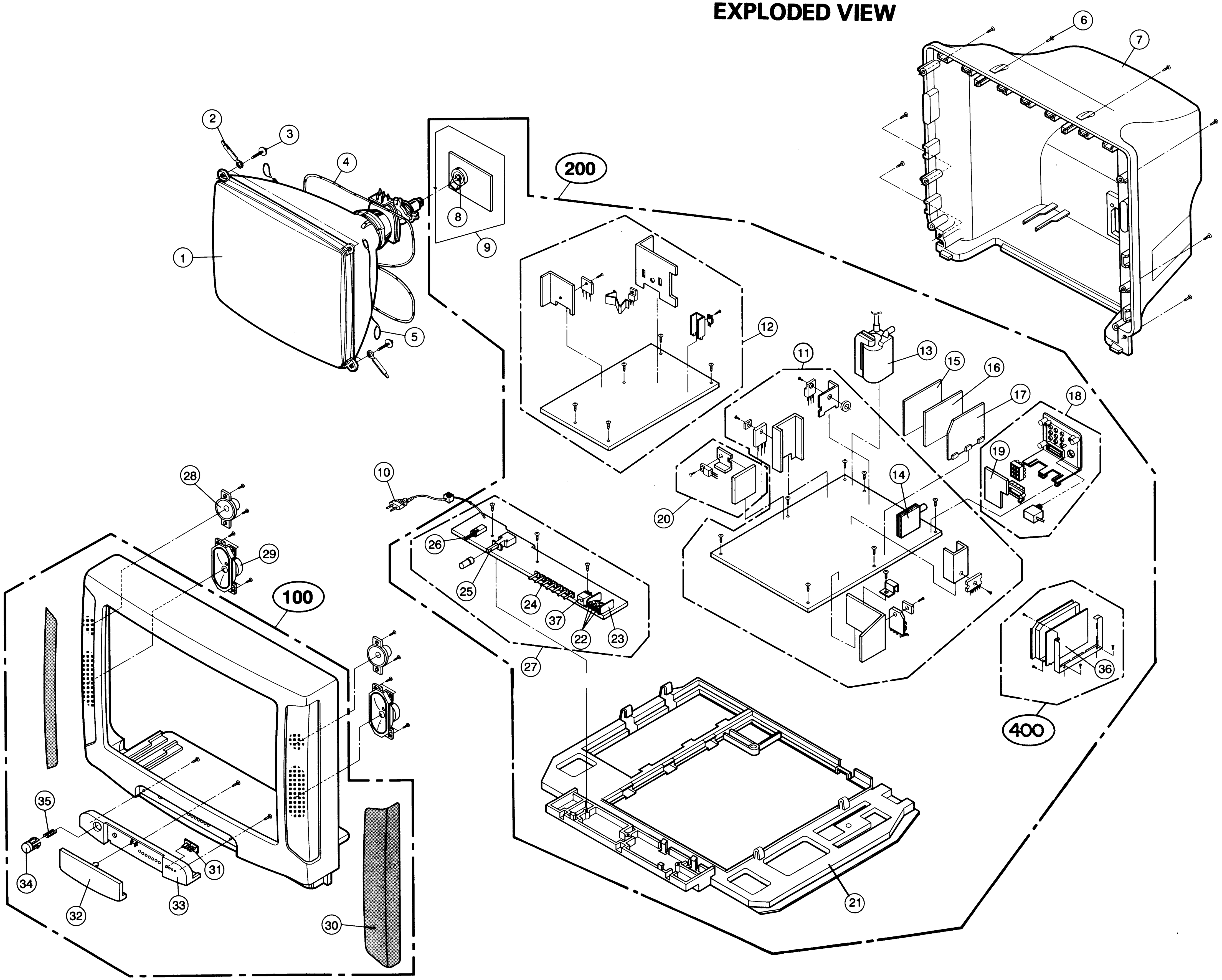
POWER P.C.BOARD (COMPONENT SIDE)


111-J60B POWER MC-15A 4605-2 (930324 / HYP)
①

CONTROL P.C.BOARD (COMPONENT SIDE)


MAIN SWITCH
PA1 (PRE-AMP)
MC-15A 111-L9
PARK S.H
AC INPUT

EXPLODED VIEW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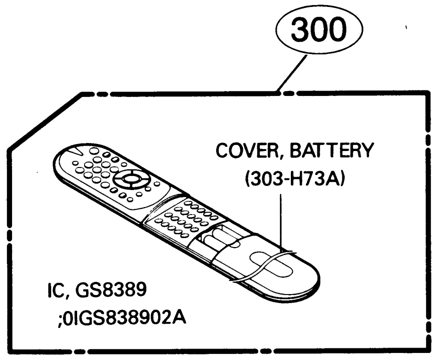
100
200
400


300
COVER, BATTERY
(303-H73A)
IC, GS8389
;0IGS838902A

NO.	DESCRIPTION	PART NO
⚠ 1	COLOUR PICTURE TUBE	112-C29B
2	HOLDER LEAD WIRE	341-470D
3	SCREW, HEXAGON HEAD	332-229G
⚠ 4	COIL, DEGAUSSING	150-822G
⚠ 5	LEAD SET, CPT EARTH	170-797R
6	SCREW	1PTF0403116
7	COVER ASSY, BACK	303-J49A
8	SOCKET, CPT	381-094D
9	PCB ASSY, CPT	110-Y14A
10	CORD ASSY, POWER	174-199W
11	PCB ASSY, MAIN	110-Y88A
12	PCB ASSY, SMPS	110-V93G
⚠ 13	FLYBACK TRANSFORMER	154-179Q
14	TUNER	113-207B
15	PCB ASSY, SYSTEM	110-V75C
16	PCB ASSY, A/V	110-V76B
17	PCB ASSY, IF/STEREO	110-V74E
18	BOARD ASSY, A/V ANT	401-713E
19	PCB ASSY, A/V JACK	110-S75G
20	PCB ASSY, E/W	110-V77D
21	FRAME, MAIN	312-395A
22	LED	0DL500000AA, 0DL138000AA
23	HOLDER, LED	341-752A
24	SWITCH, TACT	140-248D
⚠ 25	SWITCH, MAIN	140-289A
26	SWITCH, PUSH	140-275B
27	PCB ASSY, CONTROL	110-Z26G
28	SPEAKER, SQUAKWER	120-C77D
29	SPEAKER, TWEETER	120-C76D
30	GRILL, SPEAKER	314-289B
31	WINDOW, PRE-AMP	316-403A
32	DOOR ASSY, CONTROL	315-575C
33	PANEL, CONTROL	313-244A
34	BUTTON, POWER	441-330A
35	SPRING, KNOB	320-062F
36	PCB ASSY, PIP	110-W32H
37	PRE-AMP	106-048A

SUB ASSY

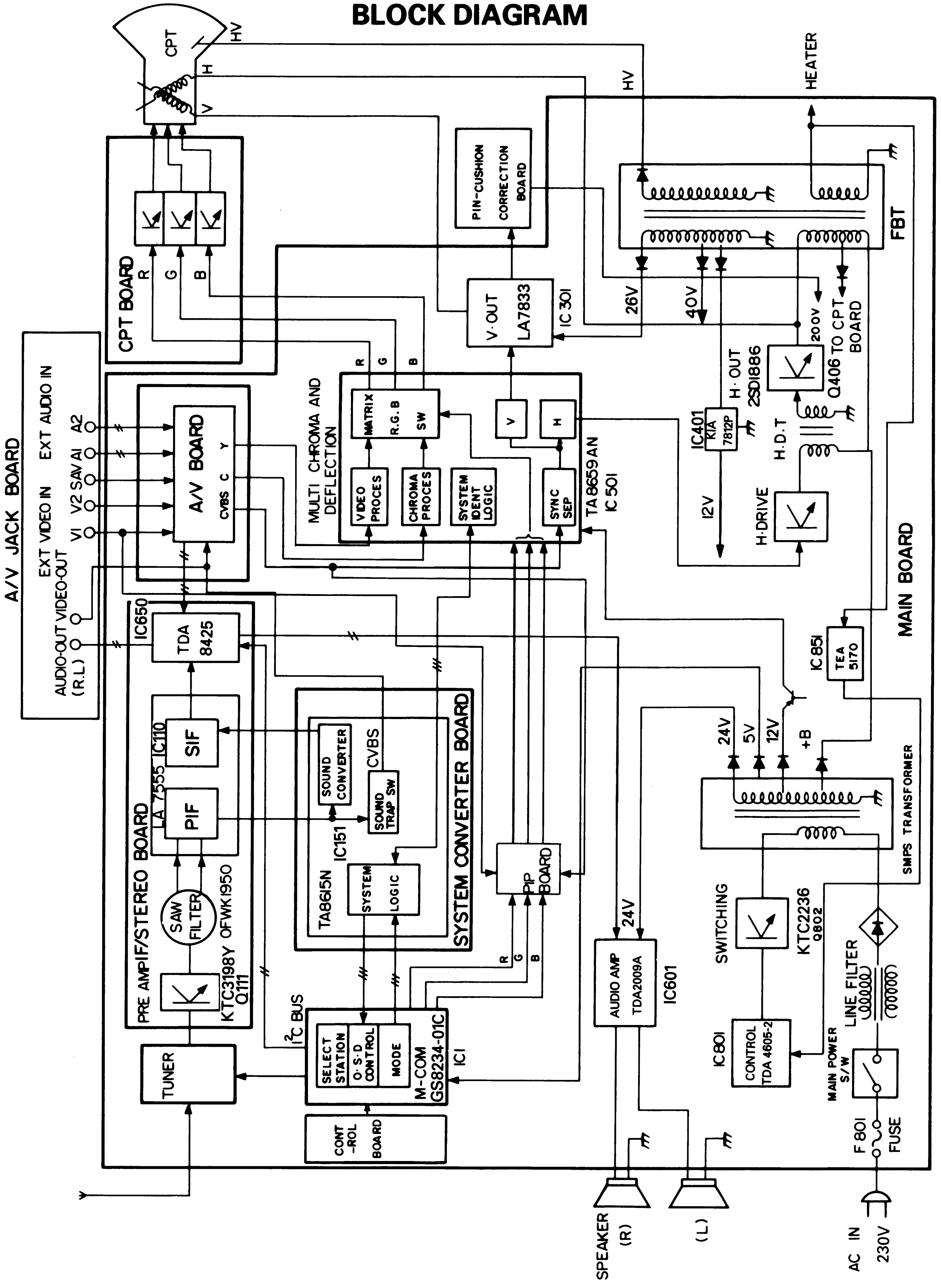
100	CABINET ASSY	300-A90Y
200	CHASSIS ASSY, MAIN	309-A77U
300	TRANSMITTER	105-214G
400	CHASSIS ASSY, PIP	309-974H

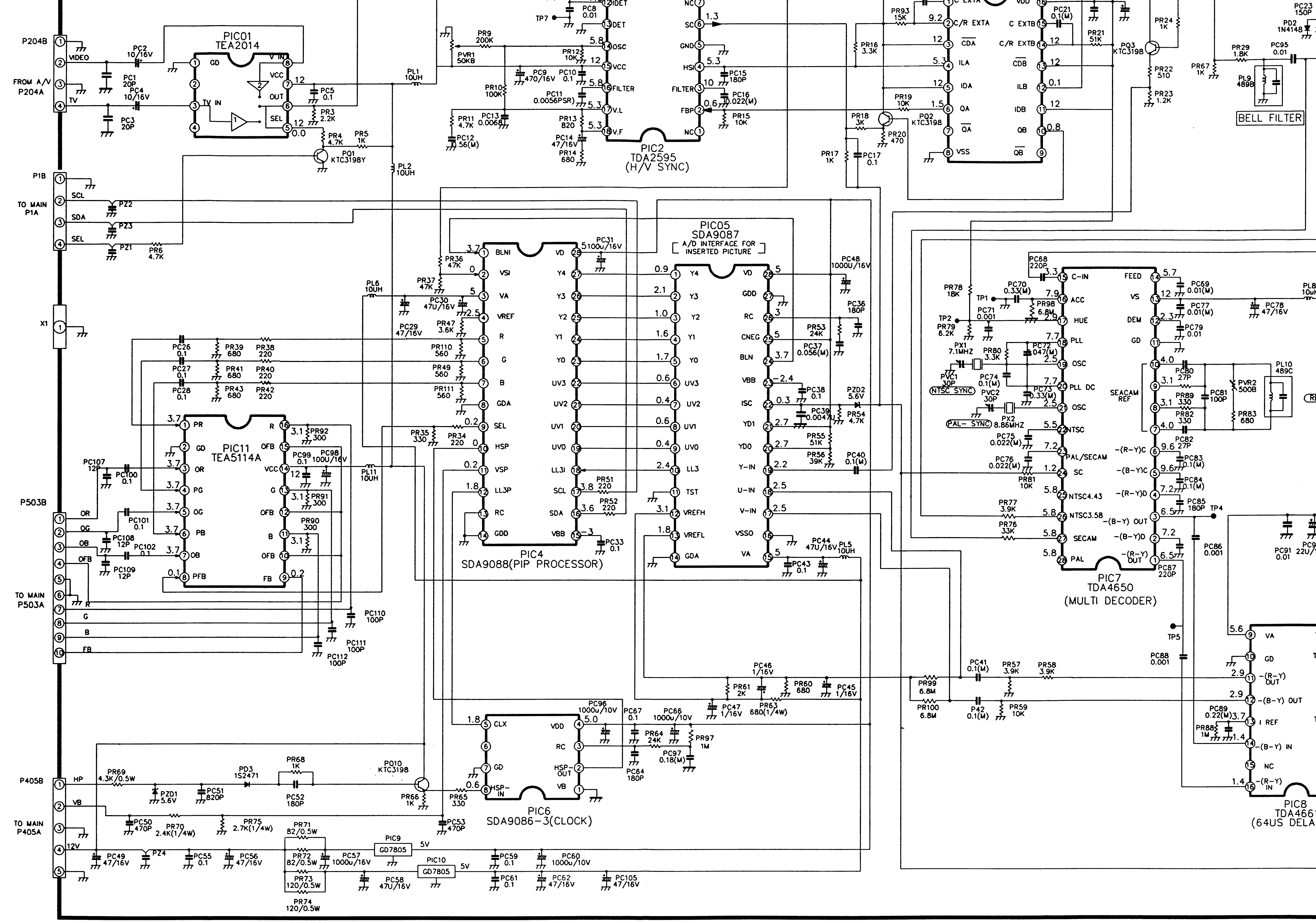
COMPONENT LOCATION GUIDE

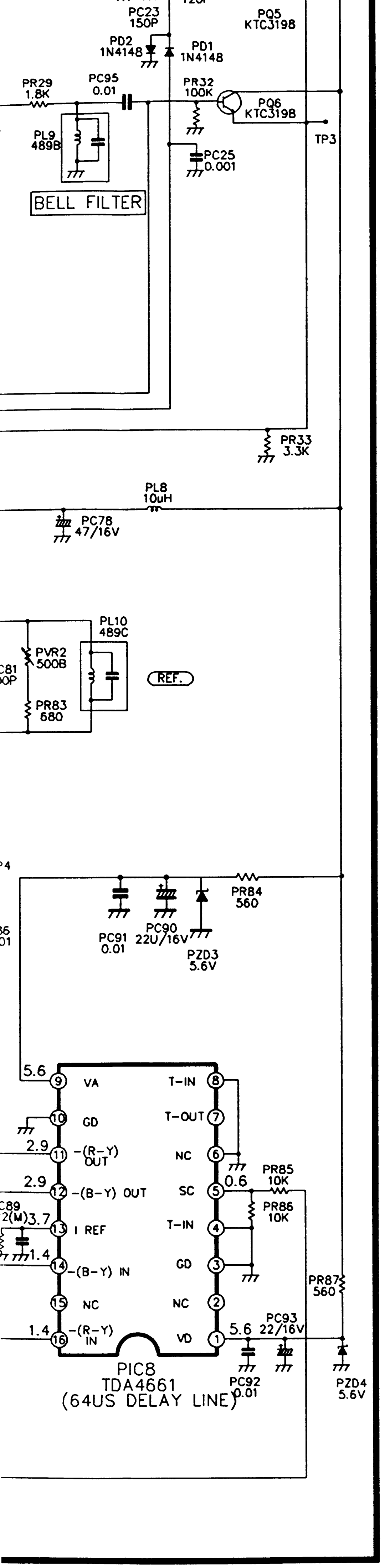
(Refer to page 25)

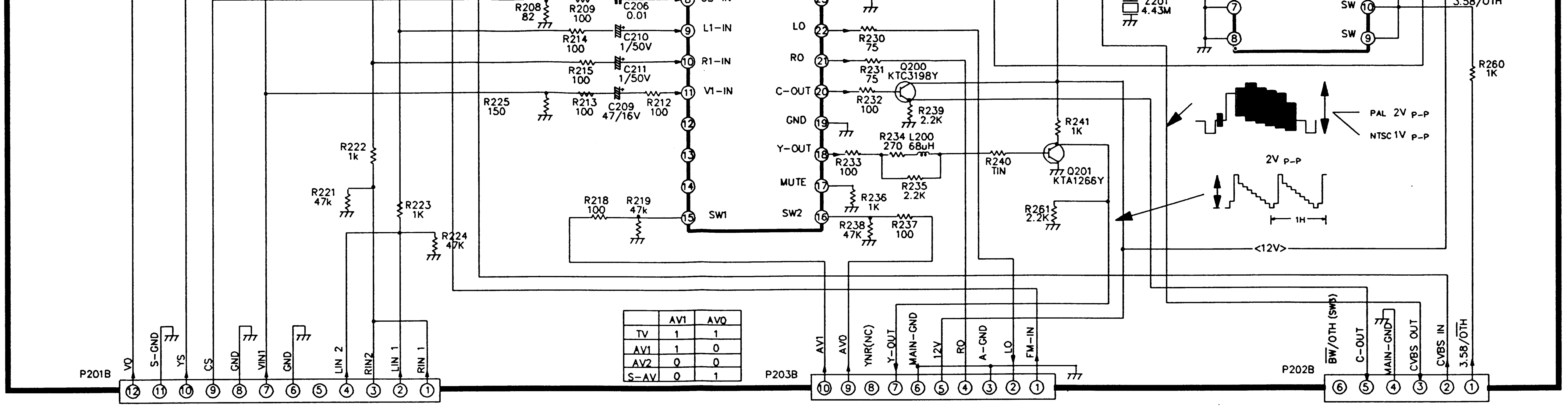
C3	A5
C4	A5
C5	A4
C6	B4
C7	B4
C8	B4
C9	B4
C10	B4
C11	D3
C12	C4
C13	B4
C14	A5
C15	B5
C16	B5
C17	B5
C18	A4
C19	B5
C20	C5
C60	C5
C61	C5
C62	C4
C63	C5
C101	F5
C102	G5
C103	F5
C104	G5
C105	G5
C106	G5
C107	G4
C108	F5
C109	F5
C301	C3
C302	C2
C303	E3
C304	E3
C305	E3
C306	E3
C307	E3
C308	E2
C309	E3
C310	D2
C311	D2
C312	E2
C313	E2
C314	E2
C317	E2
C401	D3
C403	D2
C404	C1
C405	C2
C406	C2
C407	C1
C408	C2
C409	C2
C410	D2
C411	D2
C412	B2
C413	B1
C418	F2
C419	F1
C420	F1
C421	E2
C422	E2
C423	E1
C424	D1
C425	E2
C426	G3
C427	G3
C428	G3
C429	F3
C430	G3
C431	G3
C432	G3
C433	F3
C434	G3
C435	G3
C436	G3
C437	G3
C438	F2
C439	F2
C440	G1
C441	F3
C442	C2
C444	E2
C445	D1
C446	C1
C450	E2
C500	A2
C501	A2
C502	A2
C503	B2
C504	A3
C505	B3
C506	A3
C507	B3
C508	B3
C509	B3
C510	C3
C511	C3
C512	C3
C513	B2
C514	B2
C515	C3
C516	C3
C517	B3
C518	B3
C519	C3
C520	C3
C521	C3
C522	C2
C523	C3
C525	C2
C526	C2
C528	C2
C529	A1
C530	B2
C533	A2
C534	A1
C535	B1
C536	A2
C537	B1
C538	B2
C539	B1
C540	B1
C541	A2
C542	A2
C543	B1
C544	A2
C545	B2
C546	B2
C547	C2
C548	C2
C549	C2
C550	C2
C556	C2
C601	D5
C602	D4
C603	D5
C605	D5
C606	D5
C607	E5
C608	D5
C609	D5
C610	E5
C611	C5
C620	D5
D2	B4
D3	B4
D4	B4
D5	B4
D6	B4
D7	B4
D8	B4
D9	B4
D11	A4
D12	A4
D13	A5
D108	E4
D109	E4
D301	E3
D401	B1
D402	E1
D403	F2
D404	G3
D405	G3
D406	G2
D407	G3
D408	F3
D409	G3
D410	F2
D411	F3
D412	F3
D500	A1
D501	B1
D508	B1
D605	D5
D606	D5
DL501	B3
DL502	A2
FR401	D2
FR402	E2
FR403	G2
FR404	F2
FR405	F3
FR406	G2
FR407	F2
FR408	G1
FR601	C1
IC1	B5
IC2	C4
IC3	C5
IC4	B2
IC301	E3
IC401	F3
IC501	B2
IC601	D5
L1	A5
L101	F5
L401	B1
L402	E1
L403	E1
L404	D1
L405	E2
L406	F3
L407	G3
L451	C1
L500	A2
L501	B3
L502	B3
L503	B3
L504	C3
L506	A1
L511	C1
L512	B3
P401	E2
P402	F3
P501	C2
P502	C1
P604	C5
P605	C4
P607	B5
P801	G1
P01A	A3
P02A	A4
P101A	G5
P102A	F5
P1A	C5
P201A	G4
P202A	F4
P203A	E4
P204A	G4
P205A	G3
P403A	D1
P404A	D1
P405A	A5
P406A	A5
P406B	D3
P503A	A1
P601A	E5
P603A	C4
PA1	A2
Q4	E4
Q5	E4
Q6	D4
Q7	C5
Q8	B5
Q9	B5
Q10	B4
Q11	D3
Q12	B4
Q13	B5
Q16	C5
Q301	D3
Q302	E3
Q403	C1
Q404	C1
Q405	E2
Q406	E1
Q502	C3
Q503	C3
Q504	C3
Q505	B1
Q601	E5
R6	B5
R9	E4
R10	E4
R11	D4
R12	C4
R13	C4
R14	C4
R15	B4
R16	B4
R17	D3
R18	B4
R19	D3
R20	D3
R21	D3
R22	A3
R23	A3
R24	A3
R25	B4
R26	B4
R27	B4
R28	B4
R31	B4
R32	B4
R33	C4
R34	C4
R35	C4
R36	C4
R37	C4
R38	A5
R39	B5
R40	B5
R41	B5
R42	B5
R43	A5
R44	A5
R45	A4
R46	A4
R47	A4
R48	A4
R49	A5
R50	A4
R51	A4
R54	A5
R55	A5
R60	C5
R101	F5
R102	F5
R103	F5
R104	G5
R105	F5
R106	F5
R151	G5
R301	D3
R302	D3
R303	C3
R304	C2
R305	D2
R306	C2
R307	E3
R308	E2
R309	E2
R310	F3
R311	F3
R312	F3
R313	D2
R314	D2
R315	D2
R316	D2
R317	E2
R318	E2
R319	F3
R320	D3
R321	F3
R322	F3
R401	D3
R402	D2
R404	D2
R405	C1
R406	C1
R409	C2
R410	D2
R411	C2
R412	C1
R413	C1
R414	D2
R415	D3
R420	B1
R421	B1
R422	D2
R423	F3
R424	E2
R425	G2
R426	G2
R428	F1
R429	G3
R430	G3
R431	G3
R432	G2
R433	G2
R434	G1
R435	G1
R436	G1
R437	G3
R438	B1
R440	G3
R470	B2
R501	B1
R502	B1
R506	A1
R507	A1
R510	C3
R511	C3
R512	C3
R513	C3
R514	A2
R515	A2
R516	B2
R517	B3
R518	B3
R519	B3
R520	B3
R521	C3
R522	C3
R523	B2
R524	C3
R525	C3
R526	C3
R527	C3
R528	B2
R529	C3
R530	C3
R532	C2
R533	C3
R534	C2
R536	B2
R537	B2
R538	A2
R541	B1
R542	A1
R544	B2
R546	B1
R547	B1
R548	C2
R549	C2
R550	C2
R560	B1
R601	D4
R603	D5
R604	D4
R606	D5
R609	E5
R610	D5
R612	E5
R613	E5
R618	D5
R619	D5
RA1	B4
RA2	B5
RA3	C4
SW301	F3
SW302	F3
T401	F2
T402	E2
TU101	F5
VR301	C3
VR401	C1
VR501	B3
VR503	B1
X1	C5
X401	C1
X501	C3
X502	C2
ZD3	B5
ZD4	A4
ZD5	A4
ZD301	C2
ZD302	C2
ZD303	F3
ZD305	E3
ZD306	E3
ZD307	E3
ZD401	D2
ZD402	B1
ZD405	G2
ZD406	C2
ZD500	A1
ZD501	A1
ZD502	C3

BLOCK DIAGRAM

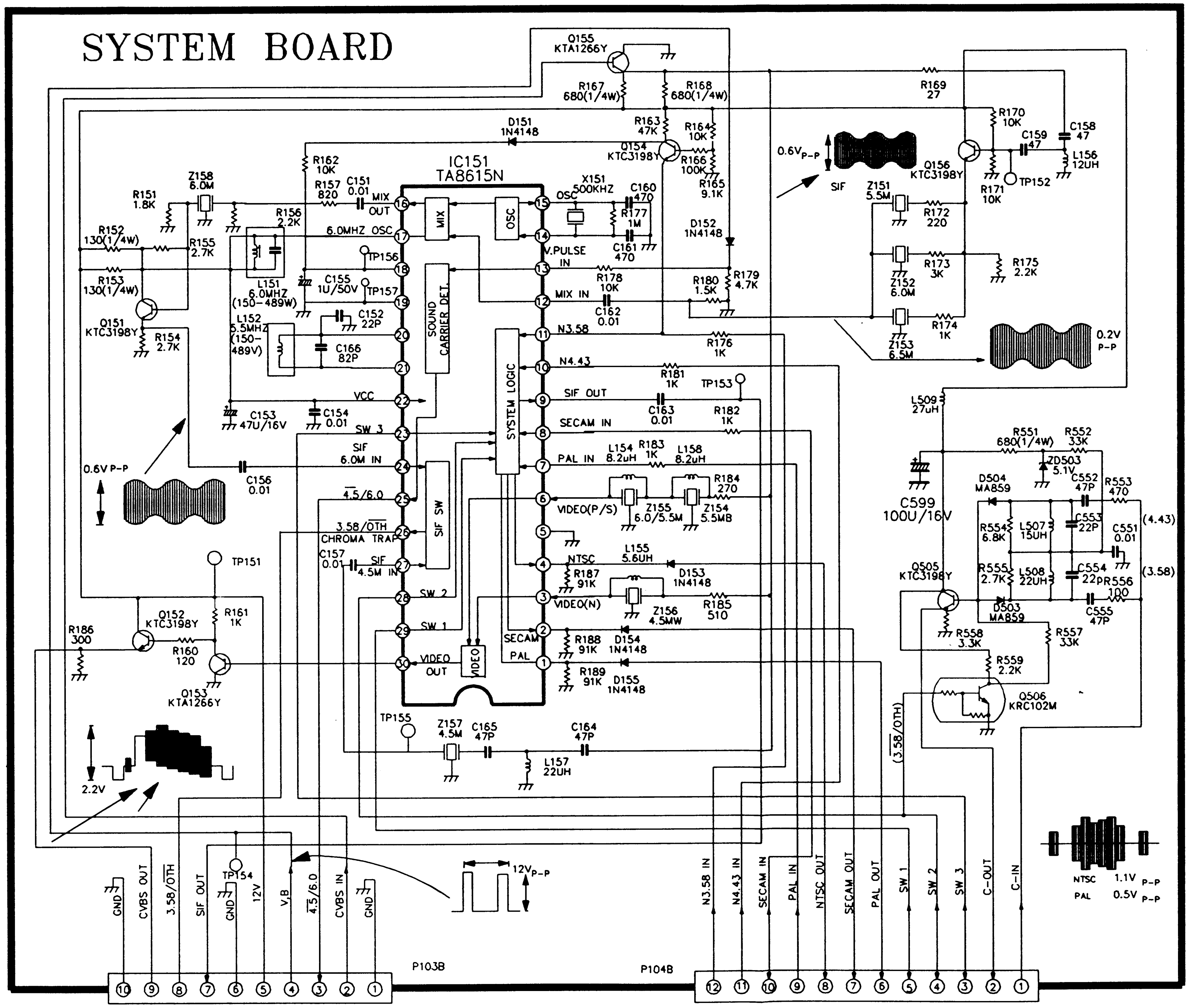

CPT
HV
H
V
CPT BOARD
R
G
B
PIN-CUSHION CORRECTION BOARD
HV
HEATER
FBT
V-OUT LA7833
IC 301
26V
40V
200V
TO CPT BOARD
H-OUT 2SD1886
Q406
IC401 KIA 7812P
12V
H.D.T
H-DRIVE
MAIN BOARD
MULTI CHROMA AND DEFLECTION
MATRIX
R.G.B SW
VIDEO PROCES
CHROMA PROCES
SYSTEM IDENT LOGIC
SYNC SEP
TA8659AN
IC 501
A/V JACK BOARD
EXT VIDEO IN
EXT AUDIO IN
V1
V2
SAV A1
A2
AUDIO-OUT (R.L)
VIDEO-OUT
A/V BOARD
CVBS
C
Y
IC650
TDA 8425
PRE AMP
IF/STEREO BOARD
LA 7555
IC110
PIF
SIF
SAW FILTER
OFWK1950
KTC3198Y
Q111
SYSTEM CONVERTER BOARD
SOUND CONVERTER
CVBS
SOUND TRAP SW
IC151
TA8615N
SYSTEM LOGIC
PIP BOARD
R
G
B
TUNER
I²C BUS
SELECT STATION
O·S·D CONTROL
MODE
M-COM GS8234-01C
IC1
CONT-ROL BOARD
AUDIO AMP TDA2009A
IC601
24V
IC851
TEA 5170
24V
5V
12V
+B
SMPS TRANSFORMER
SWITCHING
KTC2236
Q802
IC801
CONTROL TDA 4605-2
LINE FILTER
MAIN POWER S/W
F 801
FUSE
SPEAKER (R)
(L)
AC IN 230V


P204B
FROM A/V P204A
VIDEO
TV
PIC01 TEA2014
PC2 10/16V
PC1 20P
PC4 10/16V
PC3 20P
PC5 0.1
PR3 2.2K
PR4 4.7K
PR5 1K
PQ1 KTC3198Y
PL1 10UH
PL2 10UH
TP7
PC8 0.01
PR9 200K
PVR1 50KB
PR12 10K
PC9 470/16V
PC10 0.1
PR10 100K
PC11 0.0056PSR)
PR11 4.7K
PC13 0.0068
PC12 0.56(M)
PR13 820
PC14 47/16V
PR14 680
PIC2 TDA2595 (H/V SYNC)
PC15 180P
PC16 0.022(M)
PR15 10K
PR93 15K
PR16 3.3K
PR19 10K
PR18 3K
PQ2 KTC3198
PR20 470
PR17 1K
PC17 0.1
PC21 0.1(M)
PR21 51K
PQ3 KTC3198
PR24 1K
PR22 510
PR23 1.2K
PC23 150P
PD2 1N4148
PR29 1.8K
PC95 0.01
PR67 1K
PL9 489B
BELL FILTER
P1B
TO MAIN P1A
SCL
SDA
SEL
PZ2
PZ3
PZ1
PR6 4.7K
X1
PIC05 SDA9087
A/D INTERFACE FOR INSERTED PICTURE
PC31 100u/16V
PC48 1000U/16V
PC36 180P
PR53 24K
PC37 0.056(M)
PC38 0.1
PZD2 5.6V
PC39 0.0047U
PR54 4.7K
PR55 51K
PR56 39K
PC40 0.1(M)
PC44 47U/16V
PL5 10UH
PC43 0.1
PIC4 SDA9088(PIP PROCESSOR)
PR36 47K
PR37 47K
PL6 10UH
PC30 47U/16V
PC29 47/16V
PR47 3.6K
PR110 560
PR49 560
PR111 560
PR35 330
PR34 220
PR51 220
PR52 220
PC33 0.1
PC26 0.1
PR39 680
PR38 220
PC27 0.1
PR41 680
PR40 220
PC28 0.1
PR43 680
PR42 220
PIC11 TEA5114A
PR92 300
PC99 0.1
PC98 1000U/16V
PL11 10UH
PR91 300
PR90 300
PC107 12P
PC100 0.1
PC101 0.1
PC108 12P
PC102 0.1
PC109 12P
P503B
TO MAIN P503A
OR
OG
OB
OFB
R
G
B
FB
PC110 100P
PC111 100P
PC112 100P
PC68 220P
PR78 18K
TP1
PC70 0.33(M)
PR98 6.8M
PC71 0.001
TP2
PR79 6.2K
PX1 7.1MHZ
PR80 3.3K
PC72 0.047(M)
PVC1 30P
NTSC SYNC
PC74 0.1(M)
PC73 0.33(M)
PVC2 30P
PX2 8.86MHZ
PAL- SYNC
PC75 0.022(M)
PC76 0.022(M)
PR81 10K
PR77 3.9K
PR76 33K
PC69 0.01(M)
PC77 0.01(M)
PC79 0.01
PL8 10uH
PC78 47/16V
SECAM REF
PC80 27P
PR89 330
PC81 100P
PVR2 500B
PL10 489C
PR82 330
PR83 680
PC82 27P
PC83 0.1(M)
PC84 0.1(M)
PC85 180P
TP4
PC86 0.001
PC87 220P
PC91 0.01
PIC7 TDA4650 (MULTI DECODER)
TP5
PC88 0.001
PC46 1/16V
PR61 2K
PR60 680
PC45 1/16V
PC47 1/16V
PR63 680(1/4W)
PR99 6.8M
PR100 6.8M
PC41 0.1(M)
PR57 3.9K
PR58 3.9K
P42 0.1(M)
PR59 10K
PC89 0.22(M)
PR88 1M
PIC8 TDA466 (64US DELA
PIC6 SDA9086-3(CLOCK)
PC96 1000u/10V
PC67 0.1
PC66 1000u/10V
PR64 24K
PR97 1M
PC97 0.18(M)
PC64 180P
P405B
TO MAIN P405A
HP
VB
12V
PR69 4.3K/0.5W
PZD1 5.6V
PC51 820P
PD3 1S2471
PR68 1K
PC52 180P
PO10 KTC3198
PR66 1K
PR65 330
PC50 470P
PR70 2.4K(1/4W)
PR75 2.7K(1/4W)
PC53 470P
PR71 82/0.5W
PR72 82/0.5W
PR73 120/0.5W
PR74 120/0.5W
PC49 47/16V
PZ4
PC55 0.1
PC56 47/16V
PC57 1000u/16V
PIC9 GD7805
5V
PIC10 GD7805
PC58 47U/16V
PC59 0.1
PC60 1000u/10V
PC61 0.1
PC62 47/16V
PC105 47/16V


BELL FILTER
REF.
PIC8
TDA4661
(64US DELAY LINE)
PZD3 5.6V
PZD4 5.6V
TP3


P201B
P203B
P202B
Q200 KTC3198Y
Q201 KTA1266Y
PAL 2V P-P
NTSC 1V P-P
2V P-P
1H
<12V>

	AV1	AV0
TV	1	1
AV1	1	0
AV2	0	0
S-AV	0	1


SYSTEM BOARD
IC151
TA8615N
MIX
OSC
SOUND CARRIER DET.
SYSTEM LOGIC
SIF SW
VIDEO
P103B
P104B
0.6V P-P
2.2V
12V P-P
0.6V P-P
SIF
0.2V P-P
NTSC 1.1V P-P
PAL 0.5V P-P

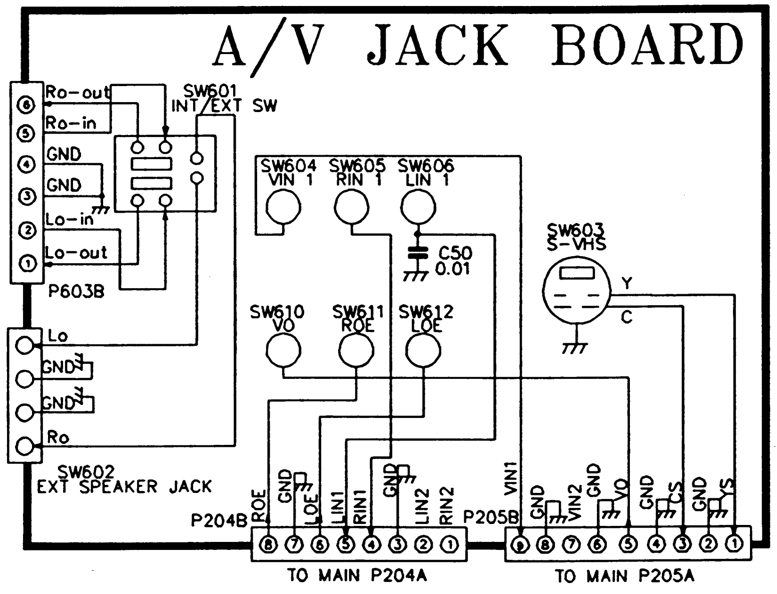
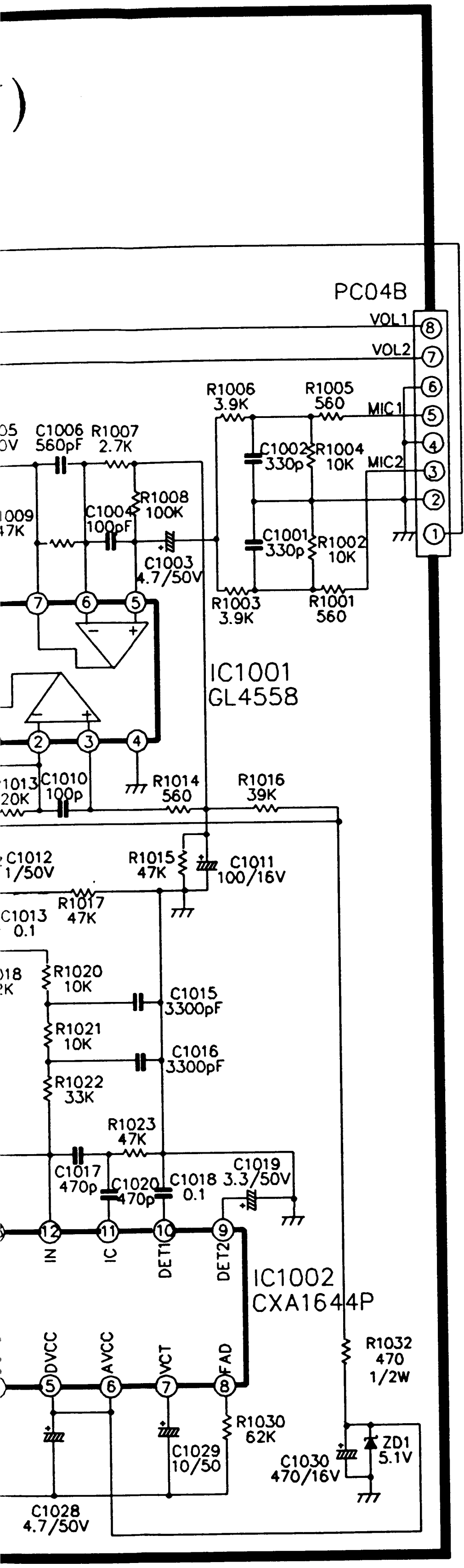

A/V JACK BOARD
SW601 INT/EXT SW
SW602 EXT SPEAKER JACK
SW603 S-VHS
P603B
P204B
P205B
TO MAIN P204A
TO MAIN P205A

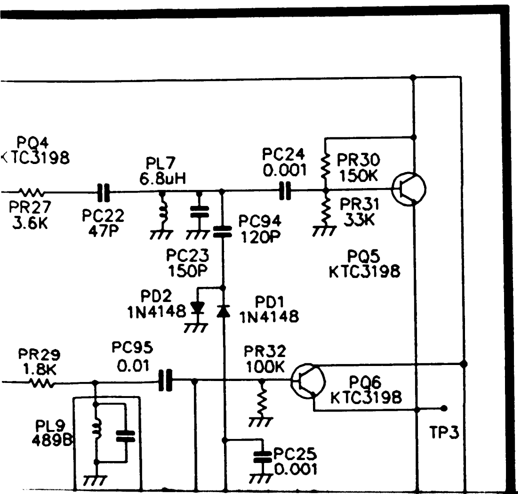
TABLE OF THE P.I.P.
(OPTION)

CIRCUIT NO	WITHOUT P.I.P	WITH P.I.P 25 INCH	WITH P.I.P 29 INCH	REMARK
	PIF/SIF/STEREO BOARD			
ZD109	2.4V	X	X	ZENER DIODE
R107	10K	X	X	RE FIXED 1/6W
R108	10K	X	X	RE FIXED 1/6W
R109	10K	X	X	RE FIXED 1/6W
Q108	KTC-3198	X	X	TRANSISTOR
Q109	KRC102M	X	X	TRANSISTOR
VJ1	0	X	X	TIN WIRE
VJ2	0	X	X	TIN WIRE
VJ30	0	X	X	TIN WIRE
R658	1.5K	1.3K	1.3K	RE FIXED 1/6W
	A/V BOARD			
P204	X	170-807H	170-807H	FLATE WIRE
R202	82	150	150	RE FIXED 1/6W
R225	82	150	150	RE FIXED 1/6W
R261	X	2.2K	2.2K	RE FIXED 1/6W
	P.I.P BOARD			
PC50		470P	820P	

P/N : 484-828G (2/2)
DATE : JUL. 5. 1994



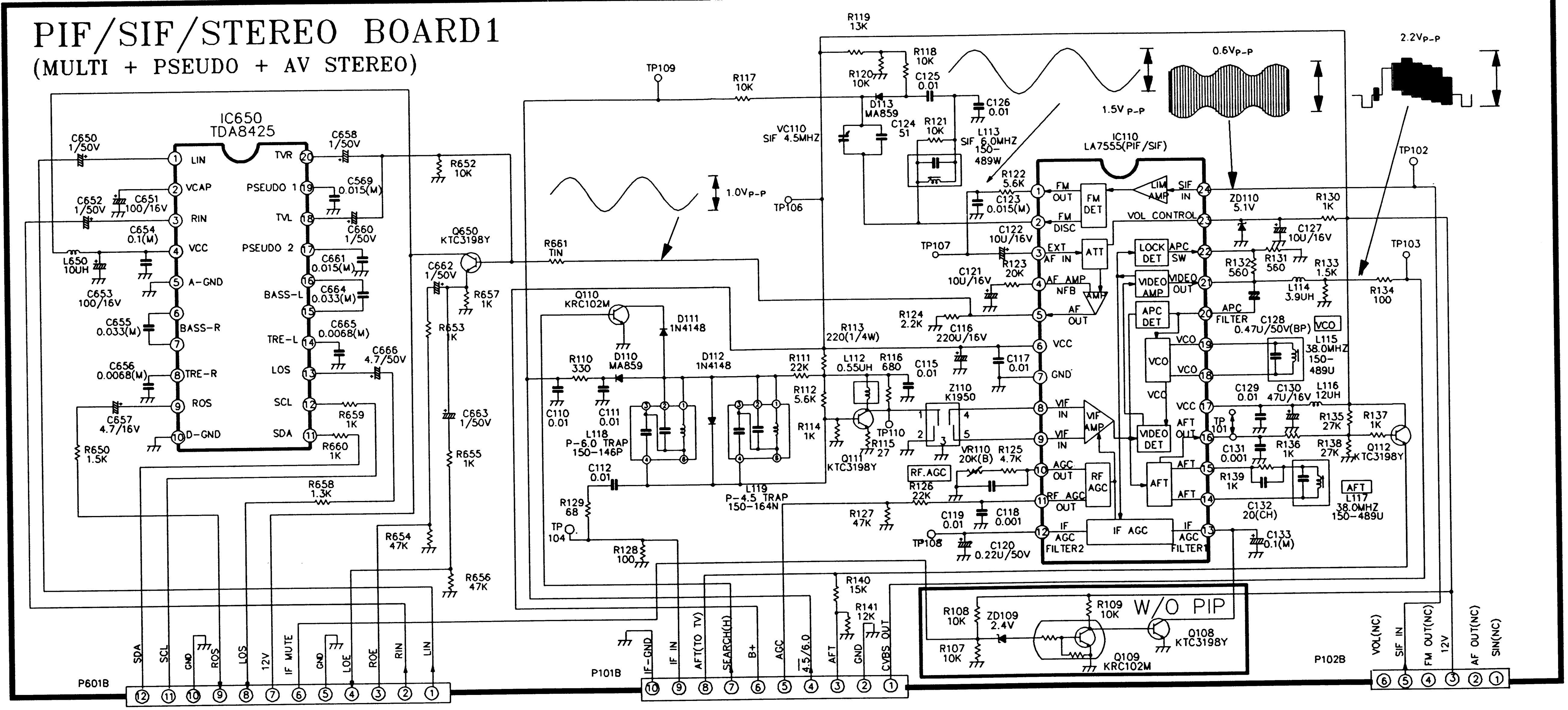
PC04B
VOL1
VOL2
MIC1
MIC2
IC1001
GL4558
IC1002
CXA1644P
R1032 470 1/2W
ZD1 5.1V
C1028 4.7/50V
C1030 470/16V



PQ4 KTC3198
PQ5 KTC3198
PQ6 KTC3198
PL7 6.8uH
PL9 489B
PD1 1N4148
PD2 1N4148
TP3

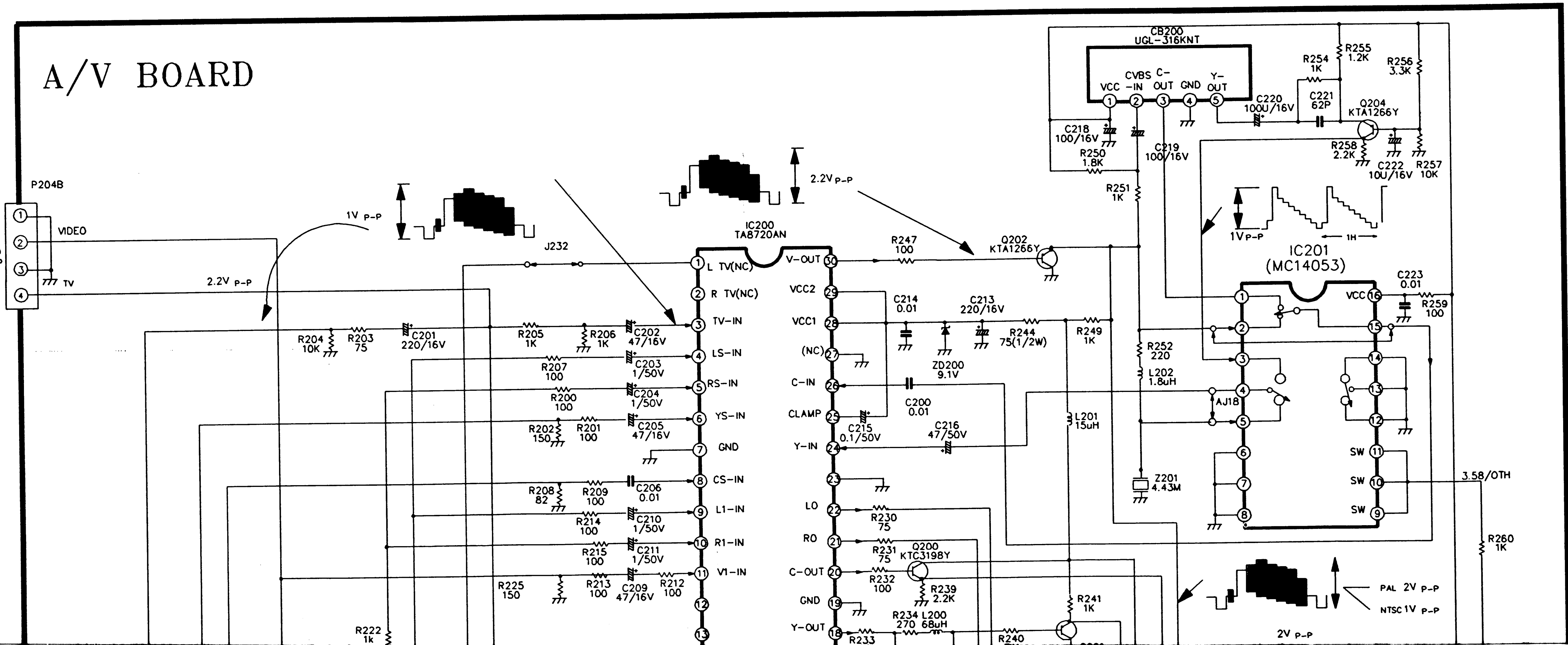
PIF/SIF/STEREO BOARD1

(MULTI + PSEUDO + AV STEREO)

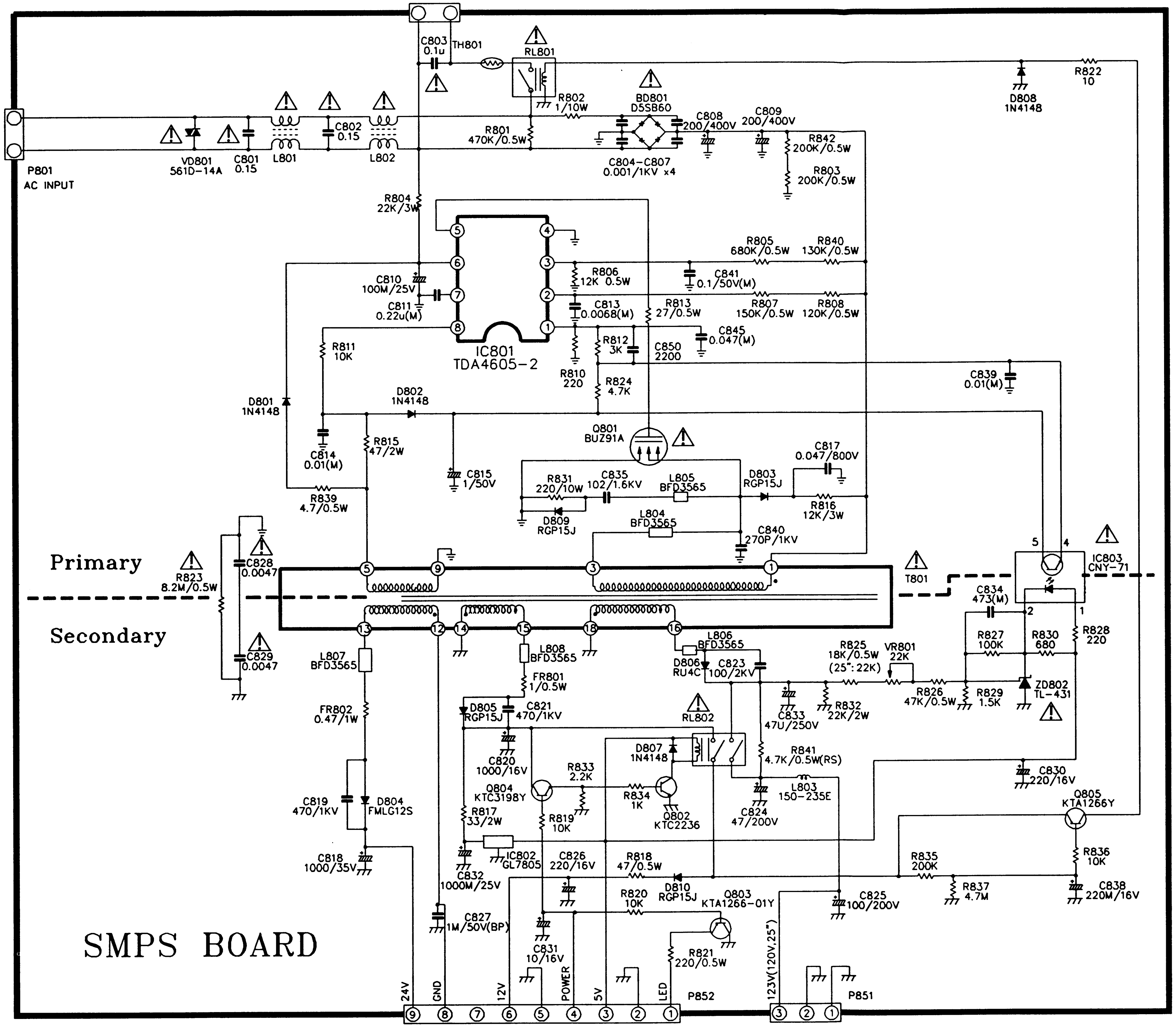


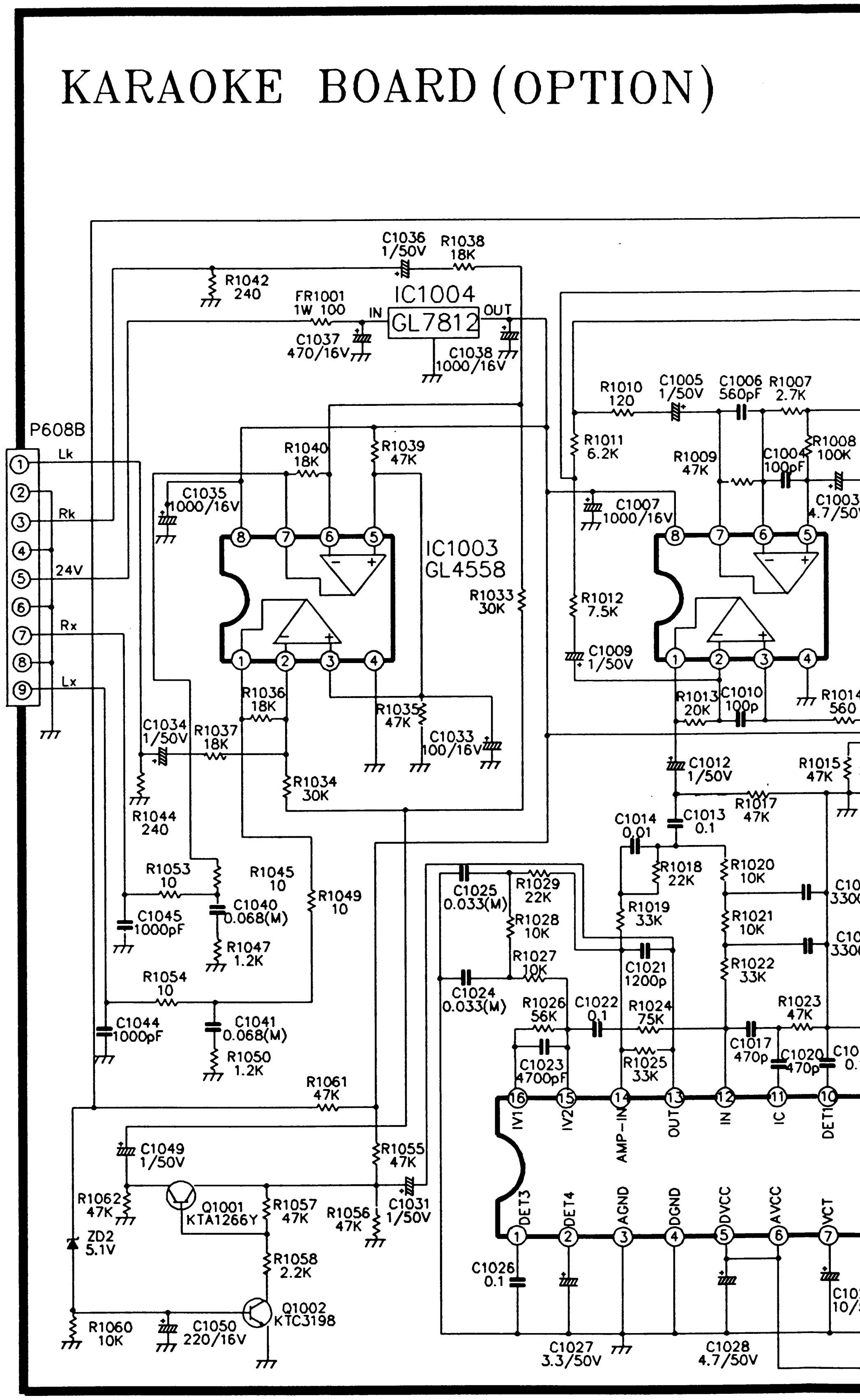
IC650
TDA8425
IC110
LA7555(PIF/SIF)
Q650 KTC3198Y
Q110 KRC102M
Q111 KTC3198Y
Q112 KTC3198Y
Z110 K1950
VC110 SIF 4.5MHZ
L113 SIF 6.0MHZ 150-489W
L115 38.0MHZ 150-489U
L117 38.0MHZ 150-489U
L118 P-6.0 TRAP 150-146P
L119 P-4.5 TRAP 150-164N
0.6Vp-p
1.5Vp-p
2.2Vp-p
1.0Vp-p
W/O PIP
Q108 KTC3198Y
Q109 KRC102M
P601B
P101B
P102B
SDA
SCL
GND
ROS
LOS
12V
IF MUTE
GND
LOE
ROE
RIN
LIN
IF-GND
IF IN
AFT(TO TV)
SEARCH(H)
B+
AGC
4.5/6.0
AFT
GND
CVBS OUT
VOL(NC)
SIF IN
FM OUT(NC)
12V
AF OUT(NC)
SIN(NC)

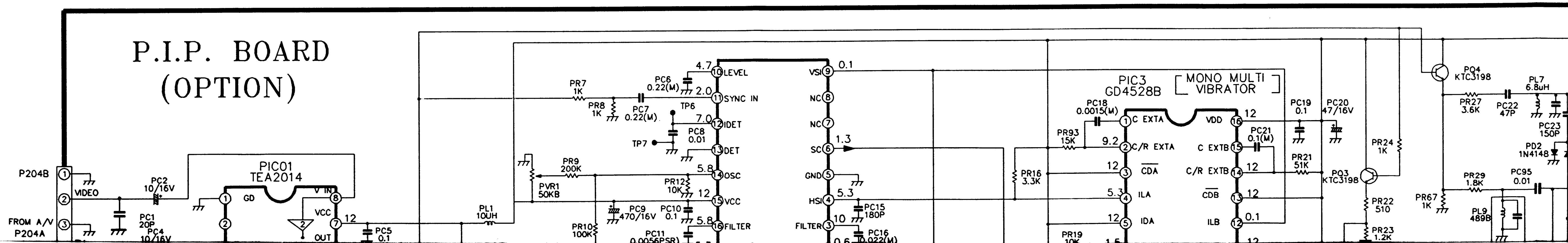
A/V BOARD



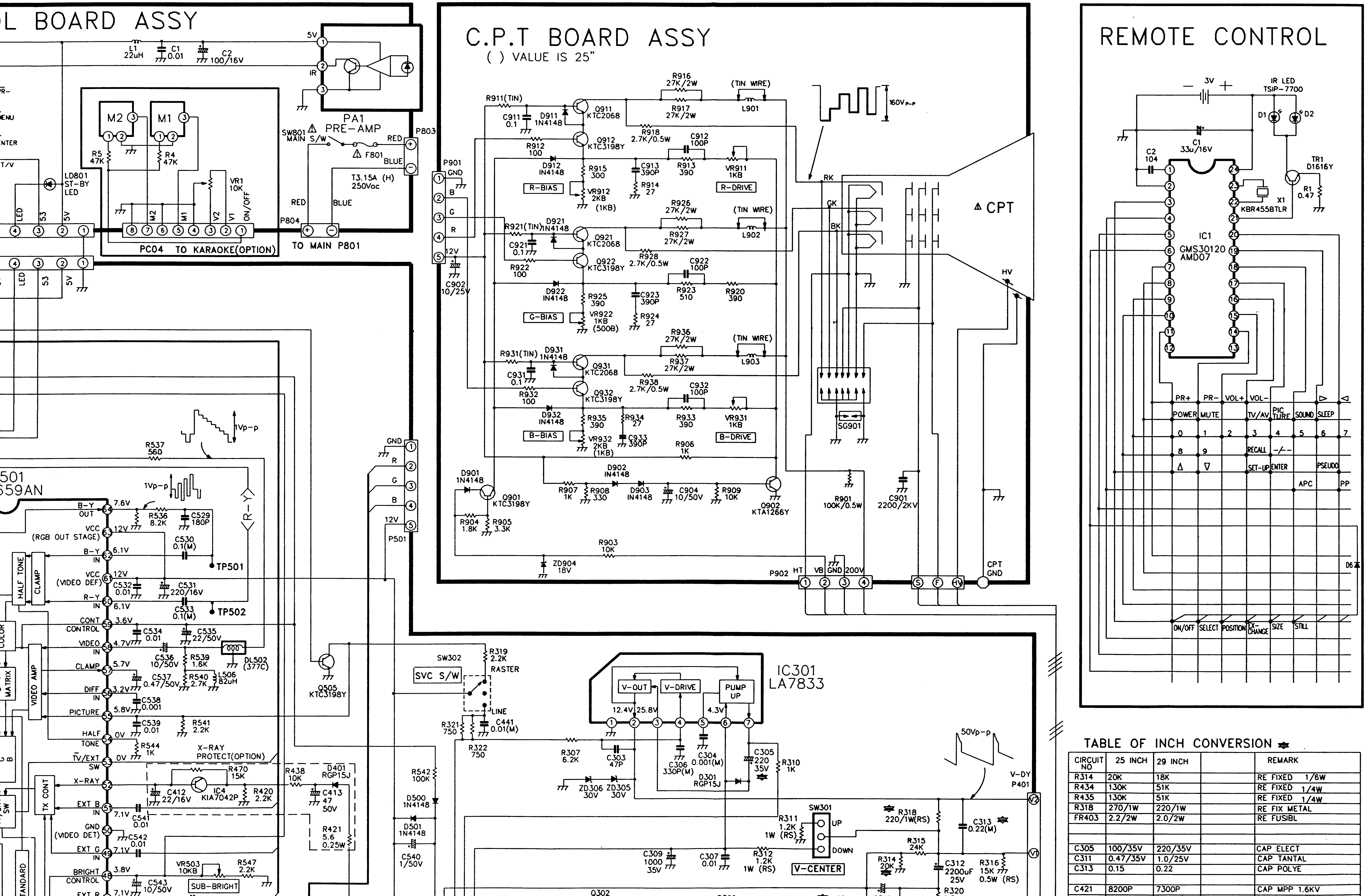
P204B
TO PIP
VIDEO
TV
J232
IC200
TA8720AN
IC201
(MC14053)
CB200
UGL-316KNT
Q202 KTA1266Y
Q204 KTA1266Y
Q200 KTC3198Y
Z201 4.43M
1V p-p
2.2V p-p
2V p-p
PAL 2V p-p
NTSC 1V p-p
3.58/OTH


SMPS BOARD
P801
AC INPUT
VD801 561D-14A
C801 0.15
L801
C802 0.15
L802
C803 0.1u
TH801
RL801
R802 1/10W
R801 470K/0.5W
BD801 D5SB60
C804-C807 0.001/1KV x4
C808 200/400V
C809 200/400V
R842 200K/0.5W
R803 200K/0.5W
D808 1N4148
R822 10
R804 22K/3W
IC801 TDA4605-2
C810 100M/25V
C811 0.22u(M)
R806 12K 0.5W
C841 0.1/50V(M)
R805 680K/0.5W
R840 130K/0.5W
C813 0.0068(M)
R813 27/0.5W
R807 150K/0.5W
R808 120K/0.5W
R812 3K
C850 2200
C845 0.047(M)
R810 220
R824 4.7K
R811 10K
D801 1N4148
D802 1N4148
C839 0.01(M)
Q801 BUZ91A
C814 0.01(M)
R815 47/2W
C815 1/50V
R839 4.7/0.5W
R831 220/10W
C835 102/1.6KV
L805 BFD3565
D809 RGP15J
L804 BFD3565
D803 RGP15J
C817 0.047/800V
R816 12K/3W
C840 270P/1KV
IC803 CNY-71
Primary
Secondary
R823 8.2M/0.5W
C828 0.0047
C829 0.0047
T801
L807 BFD3565
FR802 0.47/1W
C819 470/1KV
D804 FMLG12S
C818 1000/35V
L808 BFD3565
FR801 1/0.5W
D805 RGP15J
C821 470/1KV
C820 1000/16V
Q804 KTC3198Y
R817 33/2W
IC802 GL7805
C832 1000M/25V
C827 1M/50V(BP)
R833 2.2K
R819 10K
D807 1N4148
R834 1K
Q802 KTC2236
RL802
L806 BFD3565
D806 RU4C
C823 100/2KV
C833 47U/250V
R832 22K/2W
R825 18K/0.5W (25":22K)
VR801 22K
R826 47K/0.5W
R829 1.5K
R827 100K
R830 680
R828 220
C834 473(M)
ZD802 TL-431
R841 4.7K/0.5W(RS)
L803 150-235E
C824 47/200V
C830 220/16V
Q805 KTA1266Y
C826 220/16V
R818 47/0.5W
D810 RGP15J
R820 10K
Q803 KTA1266-01Y
C831 10/16V
R821 220/0.5W
C825 100/200V
R835 200K
R837 4.7M
R836 10K
C838 220M/16V
24V
GND
12V
POWER
5V
LED
P852
123V(120V,25")
P851


KARAOKE BOARD (OPTION)
P608B
Lk
Rk
24V
Rx
Lx
C1036 1/50V
R1038 18K
R1042 240
FR1001 1W 100
IC1004 GL7812
IN
OUT
C1037 470/16V
C1038 1000/16V
R1040 18K
R1039 47K
C1035 1000/16V
IC1003 GL4558
R1033 30K
R1036 18K
R1035 47K
C1034 1/50V
R1037 18K
C1033 100/16V
R1034 30K
R1044 240
R1053 10
R1045 10
R1049 10
C1045 1000pF
C1040 0.068(M)
R1047 1.2K
R1054 10
C1044 1000pF
C1041 0.068(M)
R1050 1.2K
R1061 47K
C1049 1/50V
R1062 47K
ZD2 5.1V
Q1001 KTA1266Y
R1057 47K
R1056 47K
R1055 47K
C1031 1/50V
R1058 2.2K
Q1002 KTC3198
R1060 10K
C1050 220/16V
R1010 120
C1005 1/50V
C1006 560pF
R1007 2.7K
R1011 6.2K
R1009 47K
C1004 100pF
R1008 100K
C1007 1000/16V
R1012 7.5K
C1009 1/50V
R1013 20K
C1010 100p
R1014 560
C1012 1/50V
R1015 47K
R1017 47K
C1014 0.01
C1013 0.1
R1018 22K
R1020 10K
C1025 0.033(M)
R1029 22K
R1028 10K
R1019 33K
R1021 10K
R1027 10K
C1021 1200p
R1022 33K
C1024 0.033(M)
R1026 56K
C1022 0.1
R1024 75K
R1023 47K
C1023 4700pF
R1025 33K
C1017 470p
C1020 470p
IV1
IV2
AMP-IN
OUT
IN
IC
DET3
DET4
AGND
DGND
DVCC
AVCC
VCT
C1026 0.1
C1027 3.3/50V
C1028 4.7/50V


P.I.P. BOARD (OPTION)
P204B
VIDEO
FROM A/V P204A
PC2 10/16V
PC1 20P
PC4 10/16V
PIC01 TEA2014
GD
VCC
OUT
V IN
PC5 0.1
PL1 10UH
PR7 1K
PR8 1K
PC6 0.22(M)
PC7 0.22(M)
TP6
TP7
PC8 0.01
PR9 200K
PVR1 50KB
PR12 10K
PR10 100K
PC9 470/16V
PC10 0.1
PC11 0.0056PSR
LEVEL
SYNC IN
IDET
DET
OSC
VCC
FILTER
VSI
NC
SC
GND
HSI
PC15 180P
PC16 0.022(M)
PIC3 GD4528B
MONO MULTI VIBRATOR
PC18 0.0015(M)
PR93 15K
PR16 3.3K
PR19 10K
C EXTA
C/R EXTA
CDA
ILA
IDA
VDD
C EXTB
C/R EXTB
CDB
ILB
PC21 0.1(M)
PC19 0.1
PC20 47/16V
PR21 51K
PQ3 KTC3198
PR24 1K
PR22 510
PR23 1.2K
PQ4 KTC3198
PR27 3.6K
PC22 47P
PL7 6.8uH
PC23 150P
PD2 1N4148
PR29 1.8K
PC95 0.01
PR67 1K
PL9 489B

GRAM(MC−15A)

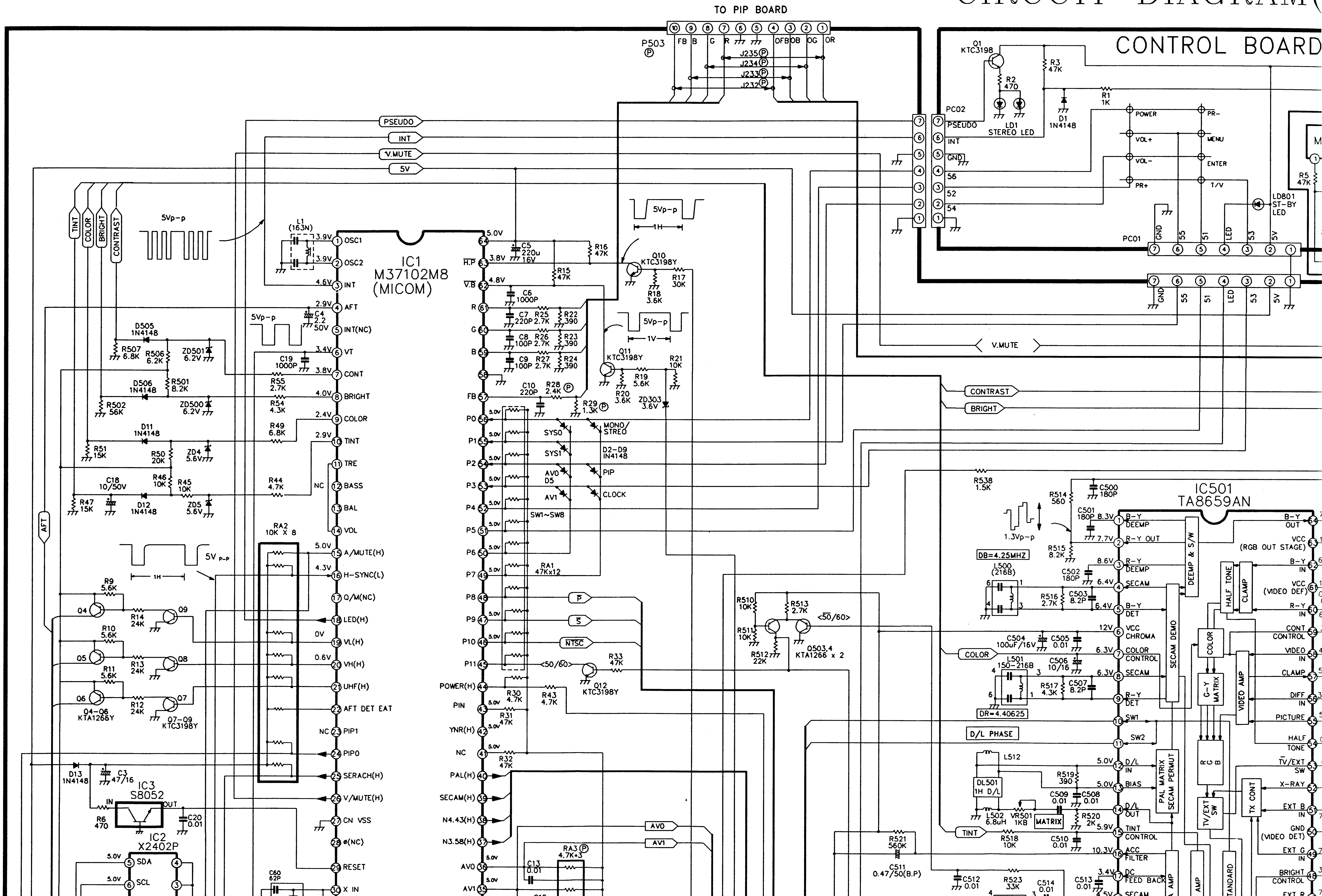


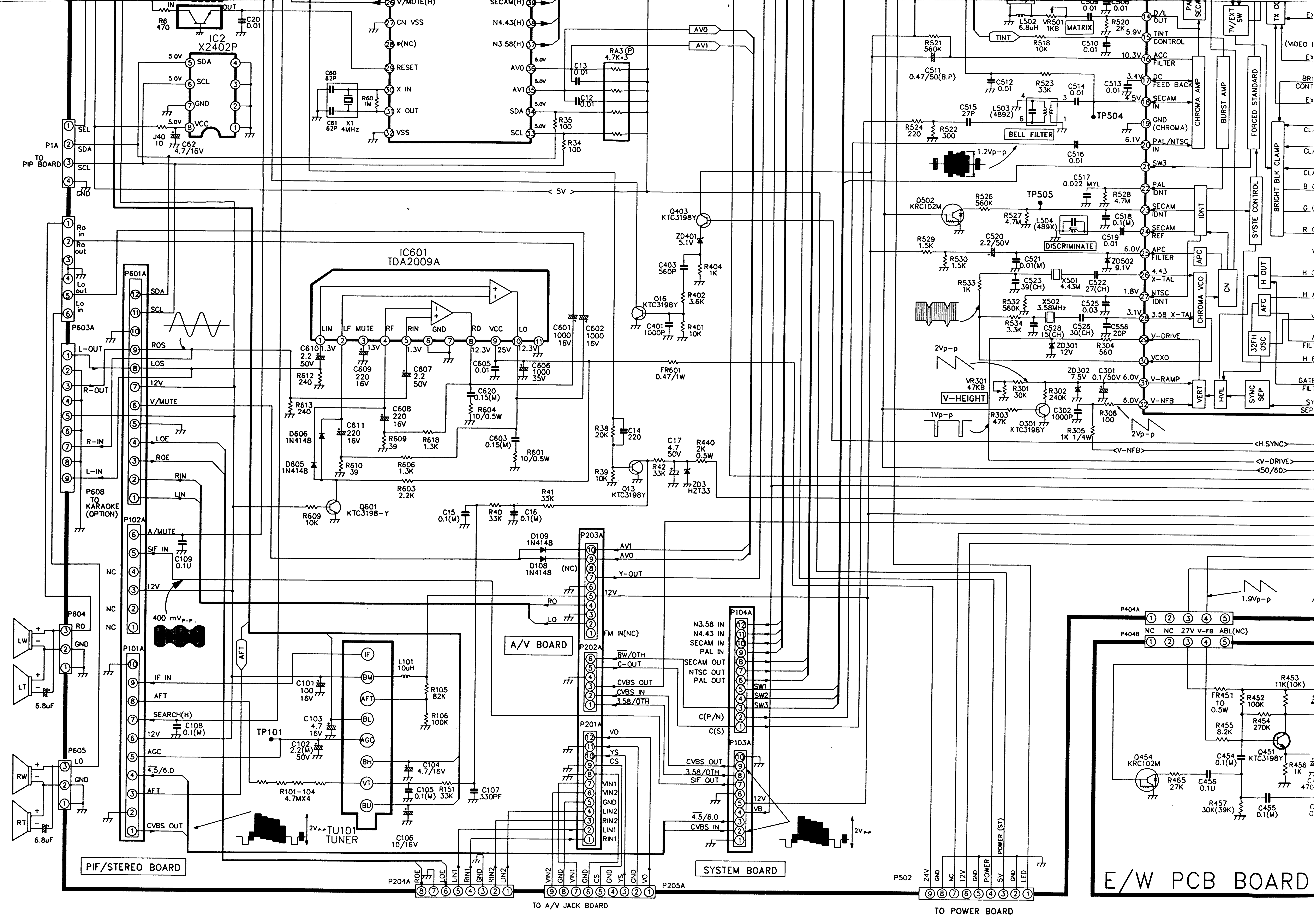
L BOARD ASSY
5V
IR
L1 22uH
C1 0.01
C2 100/16V
PA1 PRE−AMP
SW801 MAIN S/W
⚠ F801
T3.15A (H) 250Vac
RED
BLUE
P803
P804
TO MAIN P801
M2
M1
R5 47K
R4 47K
VR1 10K
M2
M1
V2
V1
ON/OFF
PC04 TO KARAOKE(OPTION)
LD801 ST−BY LED
LED
53
5V
C.P.T BOARD ASSY
( ) VALUE IS 25"
P901
GND
B
G
R
12V
C902 10/25V
R911(TIN)
C911 0.1
D911 1N4148
Q911 KTC2068
Q912 KTC3198Y
R912 100
R916 27K/2W
R917 27K/2W
(TIN WIRE)
L901
R918 2.7K/0.5W
C912 100P
D912 IN4148
R915 300
C913 390P
R913 390
VR911 1KB
R-BIAS
VR912 2KB (1KB)
R914 27
R-DRIVE
R921(TIN)
D921 1N4148
C921 0.1
Q921 KTC2068
Q922 KTC3198Y
R922 100
R926 27K/2W
R927 27K/2W
L902
R928 2.7K/0.5W
C922 100P
D922 IN4148
R925 390
C923 390P
R923 510
R920 390
G-BIAS
VR922 1KB (500B)
R924 27
R931(TIN)
D931 1N4148
C931 0.1
Q931 KTC2068
Q932 KTC3198Y
R932 100
R936 27K/2W
R937 27K/2W
L903
R938 2.7K/0.5W
C932 100P
D932 IN4148
R935 390
R934 27
R933 390
VR931 1KB
B-BIAS
VR932 2KB (1KB)
C933 390P
B-DRIVE
R906 1K
D902 IN4148
D901 1N4148
Q901 KTC3198Y
R904 1.8K
R905 3.3K
R907 1K
R908 330
D903 IN4148
C904 10/50V
R909 10K
Q902 KTA1266Y
R903 10K
ZD904 18V
160V P-P
RK
GK
BK
⚠ CPT
HV
SG901
R901 100K/0.5W
C901 2200/2KV
P902
HT
VB
GND
200V
CPT GND
S
F
H
REMOTE CONTROL
3V
IR LED TSIP−7700
D1
D2
C1 33u/16V
C2 104
TR1 D1616Y
R1 0.47
X1 KBR455BTLR
IC1 GMS30120 AMD07
PR+
PR−
VOL+
VOL−
POWER
MUTE
TV/AV
PIC TURE
SOUND
SLEEP
0
1
2
3
4
5
6
7
8
9
RECALL
−/−−
SET−UP
ENTER
PSEUDO
APC
PP
D6
ON/OFF
SELECT
POSITION
EX− CHANGE
SIZE
STILL
501
559AN
B−Y OUT
VCC (RGB OUT STAGE)
B−Y IN
VCC (VIDEO DEF)
R−Y IN
CONT CONTROL
VIDEO IN
CLAMP
DIFF IN
PICTURE
HALF TONE
TV/EXT SW
X−RAY
EXT B IN
GND (VIDEO DET)
EXT G IN
BRIGHT CONTROL
EXT R
7.6V
12V
6.1V
12V
6.1V
3.6V
4.7V
5.7V
3.2V
5.8V
0V
0V
7.1V
7.1V
3.8V
7.1V
R537 560
1Vp−p
R536 8.2K
C529 180P
C530 0.1(M)
TP501
C532 0.01
C531 220/16V
C533 0.1(M)
TP502
C534 0.01
C535 22/50V
DL502 (377C)
C536 10/50V
R539 1.6K
C537 0.47/50V
R540 2.7K
L506 82uH
C538 0.001
C539 0.01
R541 2.2K
R544 1K
X−RAY PROTECT(OPTION)
R470 15K
C412 22/16V
IC4 KIA7042P
R420 2.2K
C541 0.01
C542 0.01
VR503 10KB
R547 2.2K
C543 10/50V
SUB−BRIGHT
R438 10K
D401 RGP15J
C413 47 50V
R421 5.6 0.25W
HALF TONE
CLAMP
COLOR
MATRIX
VIDEO AMP
TX CONT
SW
STANDARD
<R−Y>
GND
R
G
B
12V
P501
Q505 KTC3198Y
SW302
SVC S/W
R319 2.2K
RASTER
LINE
R321 750
C441 0.01(M)
R322 750
R542 100K
D500 1N4148
D501 1N4148
C540 1/50V
IC301 LA7833
V−OUT
V−DRIVE
PUMP UP
12.4V
25.8V
4.3V
R307 6.2K
C303 47P
ZD306 30V
ZD305 30V
C306 330P(M)
C304 0.001(M)
D301 RGP15J
C305 220 35V
R310 1K
50Vp−p
V−DY
P401
SW301
UP
DOWN
V−CENTER
R311 1.2K 1W (RS)
R318 220/1W(RS)
C313 0.22(M)
R315 24K
C309 1000 35V
C307 0.01
R312 1.2K 1W (RS)
R314 20K
C312 2200uF 25V
R316 15K 0.5W (RS)
R320
Q302

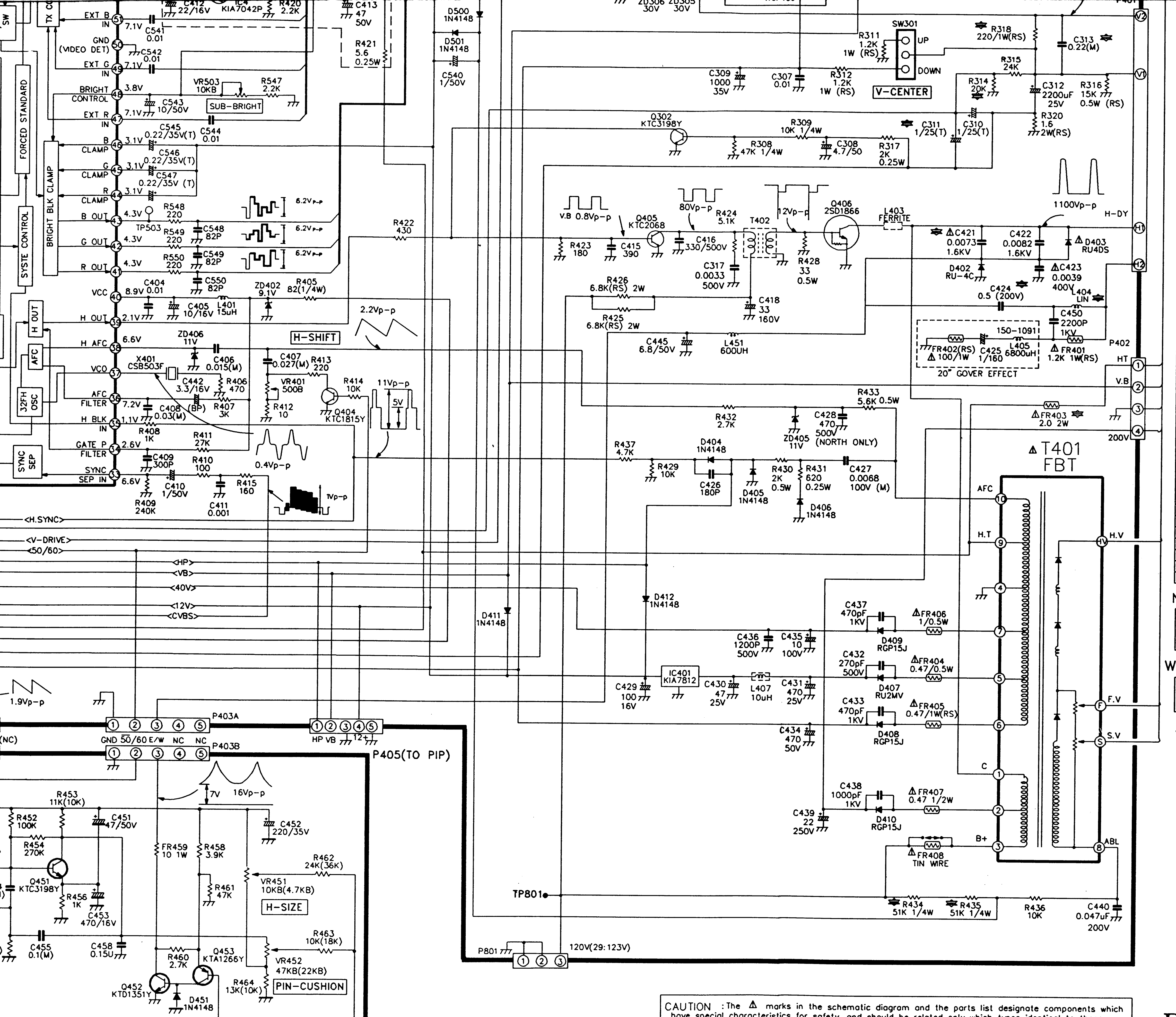
TABLE OF INCH CONVERSION ✡

CIRCUIT NO	25 INCH	29 INCH		REMARK
R314	20K	18K		RE FIXED 1/6W
R434	130K	51K		RE FIXED 1/4W
R435	130K	51K		RE FIXED 1/4W
R318	270/1W	220/1W		RE FIX METAL
FR403	2.2/2W	2.0/2W		RE FUSIBL
C305	100/35V	220/35V		CAP ELECT
C311	0.47/35V	1.0/25V		CAP TANTAL
C313	0.15	0.22		CAP POLYE
C421	8200P	7300P		CAP MPP 1.6KV

CIRCUIT DIAGRAM(


TO PIP BOARD
P503
FB
B
G
R
OFB
OB
OG
OR
J235
J234
J233
J232
CONTROL BOARD
Q1
KTC3198
R3
47K
R2
470
LD1
STEREO LED
D1
1N4148
R1
1K
PC02
PSEUDO
INT
GND
56
52
54
POWER
PR-
VOL+
MENU
VOL-
ENTER
PR+
T/V
R5
47K
LD801
ST-BY
LED
PC01
GND
55
51
LED
53
5V
PSEUDO
INT
V.MUTE
5V
TINT
COLOR
BRIGHT
CONTRAST
5Vp-p
AFT
L1
(163N)
3.9V
OSC1
OSC2
IC1
M37102M8
(MICOM)
4.6V
INT
2.9V
AFT
C4
2.2
50V
INT(NC)
3.4V
VT
C19
1000P
3.8V
CONT
4.0V
BRIGHT
2.4V
COLOR
2.9V
TINT
TRE
BASS
BAL
VOL
D505
1N4148
R507
6.8K
R506
6.2K
ZD501
6.2V
D506
1N4148
R501
8.2K
R502
56K
ZD500
6.2V
R55
2.7K
R54
4.3K
R49
6.8K
D11
1N4148
R51
15K
R50
20K
ZD4
5.6V
C18
10/50V
R46
10K
R45
10K
R44
4.7K
NC
R47
15K
D12
1N4148
ZD5
5.6V
RA2
10K X 8
5.0V
A/MUTE(H)
4.3V
H-SYNC(L)
O/M(NC)
LED(H)
0V
VL(H)
0.6V
VH(H)
UHF(H)
AFT DET EAT
NC
PIP1
PIPO
SERACH(H)
V/MUTE(H)
CN VSS
ø(NC)
RESET
X IN
1H
R9
5.6K
Q4
R14
24K
Q9
R10
5.6K
Q5
R13
24K
Q8
R11
5.6K
Q6
R12
24K
Q7
Q4-Q6
KTA1266Y
Q7-Q9
KTC3198Y
D13
1N4148
C3
47/16
IC3
S8052
IN
OUT
R6
470
C20
0.01
IC2
X2402P
SDA
SCL
C60
62P
5.0V
C5
220u
16V
R16
47K
H.P
3.8V
R15
47K
V.B
4.8V
C6
1000P
R
G
B
C7
220P
R25
2.7K
R22
390
C8
100P
R26
2.7K
R23
390
C9
100P
R27
2.7K
R24
390
C10
220P
R28
2.4K
FB
R29
1.3K
Q10
KTC3198Y
R17
30K
R18
3.6K
5Vp-p
1V
Q11
KTC3198Y
R21
10K
R19
5.6K
R20
3.6K
ZD303
3.6V
P0
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
SYS0
SYS1
AV0
D5
AV1
MONO/
STEREO
D2-D9
1N4148
PIP
CLOCK
SW1~SW8
RA1
47Kx12
P
S
NTSC
<50/60>
R33
47K
Q12
KTC3198Y
POWER(H)
PIN
YNR(H)
NC
PAL(H)
SECAM(H)
N4.43(H)
N3.58(H)
AV0
AV1
R30
4.7K
R43
4.7K
R31
47K
R32
47K
C13
0.01
RA3
4.7K*3
V.MUTE
CONTRAST
BRIGHT
R510
10K
R513
2.7K
<50/60>
R511
10K
R512
22K
Q503,4
KTA1266 x 2
COLOR
TINT
R538
1.5K
R514
560
C500
180P
IC501
TA8659AN
1.3Vp-p
C501
180P
8.3V
B-Y
DEEMP
7.7V
R-Y OUT
R515
8.2K
DB=4.25MHZ
L500
(216B)
8.6V
R-Y
DEEMP
C502
180P
6.4V
SECAM
R516
2.7K
C503
8.2P
6.4V
B-Y
DET
12V
VCC
CHROMA
C504
100uF/16V
C505
0.01
6.3V
COLOR
CONTROL
L501
150-216B
C506
10/16
6.3V
SECAM
R517
4.3K
C507
8.2P
R-Y
DET
DR=4.40625
SW1
D/L PHASE
SW2
L512
DL501
1H D/L
5.0V
D/L
IN
R519
390
5.0V
BIAS
C509
0.01
C508
0.01
L502
6.8uH
VR501
1KB
MATRIX
D/L
OUT
R520
2K
5.9V
TINT
CONTROL
R518
10K
C510
0.01
10.3V
ACC
FILTER
R521
560K
C511
0.47/50(B.P)
C512
0.01
R523
33K
C514
0.01
C513
0.01
3.4V
DC
FEED BACK
SECAM
DEEMP & S/W
SECAM DEMO
PAL MATRIX
SECAM PERMUT
HALF TONE
CLAMP
COLOR
G-Y MATRIX
VIDEO AMP
RGB
TV/EXT SW
TX CONT
AMP
AMP
STANDARD
B-Y
OUT
VCC
(RGB OUT STAGE)
B-Y
IN
VCC
(VIDEO DEF)
R-Y
IN
CONT
CONTROL
VIDEO
IN
CLAMP
DIFF
IN
PICTURE
HALF
TONE
TV/EXT
SW
X-RAY
EXT B
IN
GND
(VIDEO DET)
EXT G
IN
BRIGHT
CONTROL
EXT R


IC2
X2402P
P1A
TO PIP BOARD
SEL
SDA
SCL
GND
P603A
Ro in
Ro out
Lo out
Lo in
P601A
P608
TO KARAOKE (OPTION)
IC601
TDA2009A
LIN
LF MUTE
RF
RIN
GND
RO
VCC
LO
FR601 0.47/1W
Q601 KTC3198-Y
Q403 KTC3198Y
Q16 KTC3198Y
Q13 KTC3198Y
ZD3 HZT33
< 5V >
AV0
AV1
RA3 4.7K×3
X1 4MHz
RESET
X IN
X OUT
VSS
CN VSS
V/MUTE(H)
SECAM(H)
N4.43(H)
N3.58(H)
P604
P605
LW
LT
RW
RT
6.8uF
P102A
A/MUTE
SIF IN
NC
12V
400 mVp-p
P101A
IF IN
AFT
SEARCH(H)
AGC
4.5/6.0
CVBS OUT
TP101
TU101 TUNER
IF
BM
AFT
BL
AGC
BH
VT
BU
L101 10uH
R101-104 4.7MX4
PIF/STEREO BOARD
P204A
ROE
LOE
LIN1
RIN1
GND
RIN2
LIN2
TO A/V JACK BOARD
P205A
VIN2
VIN1
CS
YS
VO
P203A
AV1
AV0
Y-OUT
RO
LO
FM IN(NC)
D109 1N4148
D108 1N4148
A/V BOARD
P202A
BW/OTH
C-OUT
CVBS OUT
CVBS IN
3.58/OTH
P201A
P104A
N3.58 IN
N4.43 IN
SECAM IN
PAL IN
SECAM OUT
NTSC OUT
PAL OUT
SW1
SW2
SW3
C(P/N)
C(S)
P103A
SIF OUT
VB
SYSTEM BOARD
P502
24V
POWER
POWER (ST)
5V
LED
TO POWER BOARD
P404A
P404B
27V V-FB ABL(NC)
1.9Vp-p
E/W PCB BOARD
Q454 KRC102M
Q451 KTC3198Y
MATRIX
TINT
D/L OUT
TINT CONTROL
ACC FILTER
DC FEED BACK
SECAM IN
GND (CHROMA)
PAL/NTSC IN
SW3
PAL IDNT
SECAM IDNT
SECAM REF
APC FILTER
4.43 X-TAL
NTSC IDNT
3.58 X-TAL
V-DRIVE
VCXO
V-RAMP
V-NFB
CHROMA AMP
BURST AMP
FORCED STANDARD
SYSTE CONTROL
BRIGHT BLK CLAMP
IDNT
APC
CN
CHROMA VCO
H OUT
AFC
32FH OSC
VERT
HVIL
SYNC SEP
TV/EXT SW
BELL FILTER
TP504
TP505
Q502 KRC102M
DISCRIMINATE
X501 4.43M
X502 3.58MHz
Q301 KTC3198Y
V-HEIGHT
VR301 47KB
2Vp-p
1Vp-p
1.2Vp-p
<H.SYNC>
<V-NFB>
<V-DRIVE>
<50/60>


EXT B IN
GND (VIDEO DET)
EXT G IN
BRIGHT CONTROL
EXT R IN
B CLAMP
G CLAMP
R CLAMP
B OUT
G OUT
R OUT
VCC
H OUT
H AFC
VCO
AFC FILTER
H BLK IN
GATE P FILTER
SYNC SEP IN
FORCED STANDARD
SYSTE CONTROL
BRIGHT BLK CLAMP
H OUT
AFC
32FH OSC
SYNC SEP
SUB-BRIGHT
H-SHIFT
V-CENTER
SW301
UP
DOWN
H-SIZE
PIN-CUSHION
IC4 KIA7042P
Q302 KTC3198Y
Q405 KTC2068
Q406 2SD1866
Q404 KTC1815Y
Q451 KTC3198Y
Q452 KTD1351Y
Q453 KTA1266Y
X401 CSB503F
T402
L403 FERRITE
IC401 KIA7812
△T401 FBT
AFC
H.T
H.V
F.V
S.V
ABL
B+
C
H-DY
P402
HT
V.B
200V
P403A
P403B
GND 50/60 E/W NC NC
P405(TO PIP)
HP VB 12+
P801
120V(29:123V)
TP801
20" GOVER EFFECT
(NORTH ONLY)
1100Vp-p
80Vp-p
12Vp-p
V.B 0.8Vp-p
2.2Vp-p
11Vp-p
0.4Vp-p
1Vp-p
1.9Vp-p
16Vp-p
6.2Vp-p
<H.SYNC>
<V-DRIVE>
<50/60>
<HP>
<VB>
<40V>
<12V>
<CVBS>

BOARD ASSY ( ) --- 25"

R434	130K	51K		RE FIXED 1/4W
R435	130K	51K		RE FIXED 1/4W
R318	270/1W	220/1W		RE FIX METAL
FR403	2.2/2W	2.0/2W		RE FUSIBL
C305	100/35V	220/35V		CAP ELECT
C311	0.47/35V	1.0/25V		CAP TANTAL
C313	0.15	0.22		CAP POLYE
C421	8200P	7300P		CAP MPP 1.6KV
C424	0.62M	0.5M		CAP MPP 200V
L404	150-840B	150-840A		H-LINEAITY COIL

TABLE OF THE P.I.P FOR OPTION Ⓟ

CIRCUIT NO	WITHOUT P.I.P	WITH P.I.P		REMARK
D8	X	1N4148		DIODE
R412	100	120		RE FIXED 1/6W
R521	330K	560K		RE FIXED 1/6W
RA3	167-040B	167-040K		ARRAY RESISTOR
R29	9.3K	X		RE FIXED 1/6W
R28	2.4K	430		RE FIXED 1/6W
C102	10U/50V	2.2U/50V		CAP ELECT
J28	X	O		TIN WIRE
J78	X	O		TIN WIRE
J178	X	O		TIN WIRE
J280	X	O		TIN WIRE
J232	O	X		TIN WIRE
J233	O	X		TIN WIRE
J234	O	X		TIN WIRE
J235	O	X		TIN WIRE
P1A	X	366-921C		PIN - WAFER (4)
P405	X	366-921D		PIN - WAFER (5)
P503	X	366-921J		PIN - WAFER (10)
X1	X	366-009B		PIN - PLUG
H.SINK	407-D92C	407-P70A		IC 401

NOTICE

Since this is a basic circuit diagram,
The value components and some partical connection
are subject to change for improvement

WARNING

Before servicing this chassis, read the "X-ray Radiation Precaution", "Safety Precaution and Product Safety Notice" in the SVC Manual.

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in uF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in uH, and the values less than 1 in mH.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM form point shown to chassis ground, line voltage AC100 - 270V volts, color bar signal.
2: Voltages reading may vary ±20%
3. The schematic shown is representative only.
4. All waveforms, are taken using a wide band oscilloscope and a low capacity probe.

5. Waveforms are taken using a standard colour bar signal.

CAUTION : The △ marks in the schematic diagram and the parts list designate components which have special characteristics for safety, and should be related only which types identical to those in the original circuit or specified in the parts list. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE in the Service manual. Do not degrade the safety of the receiver through improper servicing.

P/N : 484-828G (1/2)
DATE : JUL, 5. 1994